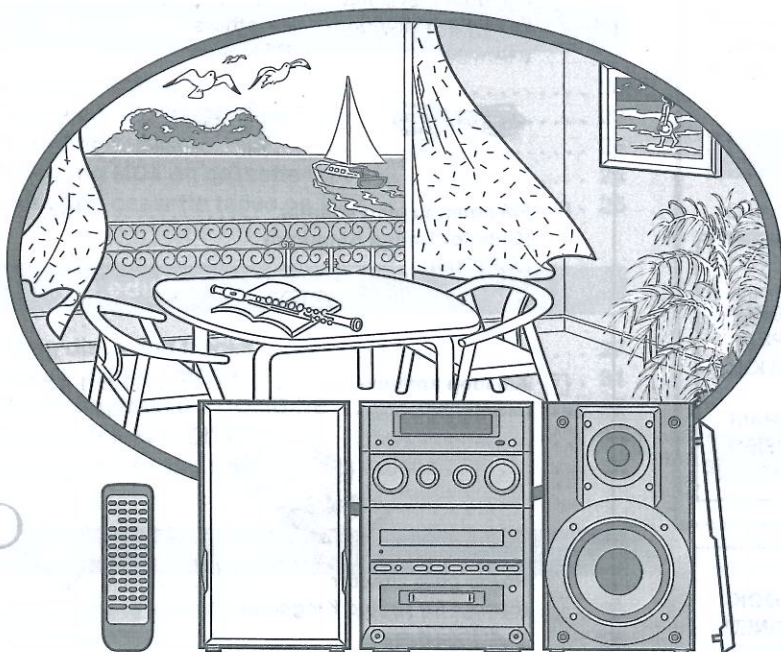


MD stereo system

SC-PM30MD

Operating Instructions



Panasonic[®]

Note:

The "EB" indication shown on the packing case indicates United Kingdom.

Before connecting, operating or adjusting this product, please read these instructions completely. Please keep this manual for future reference.

EB GCS

COMPACT
disc
DIGITAL AUDIO

Mini
Disc

RQT5151-2B

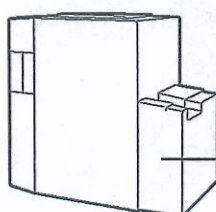
Dear customer

Thank you for purchasing this product.
For optimum performance and safety, please read these instructions carefully.

These operating instructions are applicable to the following system.

System	SC-PM30MD
Main unit	SA-PM30MD
Speakers	SB-PM30

CD and MD sections



**CLASS 1
LASER PRODUCT**

Right side of the product

DANGER	INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.
ADVARSEL	USYNLIG LASERSTRÅLING VED ÅBNING, NÅR SIKKERHEDSÅBRYDERE ER I GODE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO!	AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIHAN NÄKYMÄTÖNTÄ LASERISÄTEILYLLÄ. ÄLÄ KATSO SÄTEESEEN.
VARNING	OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÅREN ÄR URKOPPLAD. BETRÄKTA EJ STRÅLEN.
ADVARSEL	USYNLIG LASERSTRÅLING NÄR DEKSEL ÅPNES OG SIKKERHEDSGLAS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.
VORSICHT	UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.

(Inside of product)

(Indersiden af apparatet)

(Tuotteen sisällä)

(Apparatens insida)

(Produktets inside)

(Im Inneren des Gerätes)

CAUTION!

THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.

CAUTION!

DO NOT INSTALL OR PLACE THIS UNIT IN A BOOKCASE, BUILT IN CABINET OR IN ANOTHER CONFINED SPACE. ENSURE THE UNIT IS WELL VENTILATED. ENSURE THAT CURTAINS AND ANY OTHER MATERIALS DO NOT OBSTRUCT THE VENTILATION TO PREVENT RISK OF ELECTRIC SHOCK OR FIRE HAZARD DUE TO OVERHEATING.

Except for United Kingdom

CAUTION:

The AC voltage is different according to the area.
Be sure to set the proper voltage in your area before use.
(For details, please refer to page 5.)

Supplied accessories

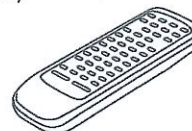


Please check and identify the supplied accessories.

- ☐ AC mains lead 1pc.
For United Kingdom (VJA0773) For others (RJA0019-2K)



- ☐ Remote control transmitter 1pc.
(EUR647201)



- ☐ Remote control batteries 2 pcs.



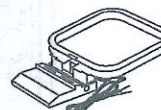
- ☐ FM indoor antenna 1pc.
For United Kingdom (RSA0007) For others (RSA0006)



- ☐ FM antenna plug adaptor 1pc.
(Only for United Kingdom) (SJP9009)



- ☐ AM loop antenna 1 pc.
(RSA0026)



- ☐ Power plug adaptor 1pc.
(Except for United Kingdom) (RJP1SG04-H)



Use numbers indicated in parentheses when asking for replacement parts.

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Safety precautions

Placement

Set the system up on an even surface away from direct sunlight, high temperatures, high humidity, and excessive vibration. These conditions can damage the cabinet and other components, thereby shortening the unit's service life.

Place it at least 15 cm away from wall surfaces to avoid distortion and unwanted acoustical effects.

Do not place heavy items on the unit.

Voltage

Do not use high voltage power sources. This can overload the unit and cause a fire.

Do not use a DC power source. Check the source carefully when setting the unit up on a ship or other place where DC is used.

AC mains lead protection

Ensure the AC mains lead is connected correctly and not damaged. Poor connection and lead damage can cause fire or electric shock. Do not pull, bend, or place heavy items on the lead.

Grasp the plug firmly when unplugging the AC mains lead. Pulling the AC mains lead can cause electric shock.

Do not handle the plug with wet hands. This can cause electric shock.

Foreign matter

Do not let metal objects fall inside the unit. This can cause electric shock or malfunction.

Do not let liquids get into the unit. This can cause electric shock or malfunction. If this occurs, immediately disconnect the unit from the power supply and contact your dealer.

Do not spray insecticides onto or into the unit. They contain flammable gases which can ignite if sprayed into the unit.

Service

Do not attempt to repair this unit by yourself. If sound is interrupted, indicators fail to light, smoke appears, or any other problem that is not covered in these instructions occurs, contact your dealer or an authorized service center. Electric shock or damage to the unit can occur if the unit is repaired, disassembled or reconstructed by unqualified persons.

Extend operating life by disconnecting the unit from the power source if it is not to be used for a long time.

(For United Kingdom)

("EB" area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 5-ampere fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local dealer.

CAUTION!

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.

THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as stated below.

If in any doubt please consult a qualified electrician.

IMPORTANT


The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral, Brown: Live.

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.

The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL  OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use

Remove the connector cover.

How to replace the fuse

The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below. Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

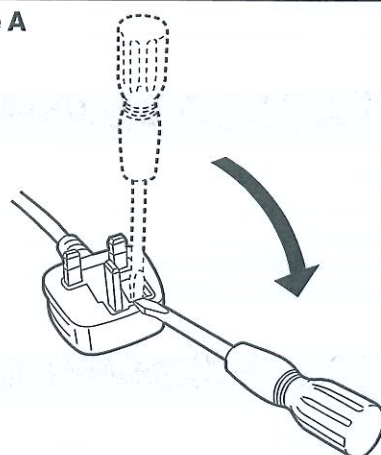
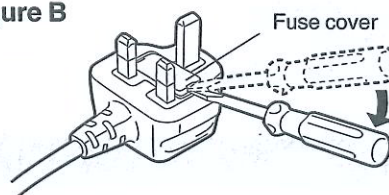


Figure B

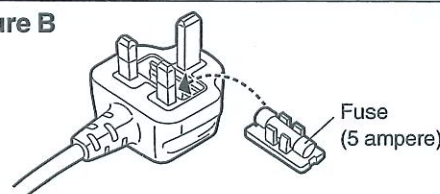


2. Replace the fuse and close or attach the fuse cover.

Figure A



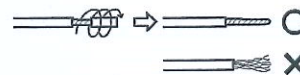
Figure B



Connections

Before connection

- Do not connect the AC mains lead until all other connections are complete.
- To prepare the AM loop antenna, and speaker cables, twist the vinyl tip and pull off.



- Do not allow the speakers to touch the system.
- The left and right speakers are the same.

1 FM antenna

Fix the other end of the antenna where reception is best.

2 AM loop antenna

Stand the antenna up on its base.

Keep loose antenna cord away from other wires and cords.

3 ① Speaker cables

② Speaker cords (pin type)

Connect the cables to the terminals of the same color. Never allow the exposed wires to contact each other when connected.

Use only the supplied speakers.

The combination of the main unit and the speakers provides the best sound. Using other speakers can damage the unit and sound quality will be negatively affected.

Note

These speakers do not have magnetic shielding. Do not place them near televisions, personal computers or other devices easily influenced by magnetism.

Caution

- Use the speakers only with the recommended system. Failure to do so may lead to damage to the amplifier and/or the speakers, and may result in the risk of fire. Consult a qualified service person if damage has occurred or if you experience a sudden change in performance.
- Do not attach these speakers to walls or ceilings.

4 (Except for United Kingdom)

Set the voltage.

Use a flat-head screwdriver to turn the voltage selector. Set it to the position for your area.

(United Kingdom only)

BE SURE TO READ THE CAUTION FOR THE AC MAINS LEAD ON PAGE 4 BEFORE PROCEEDING TO STEP 5.

5 Connect the AC mains lead.

Insertion of connector

Even when the connector is perfectly inserted, depending on the type of inlet used, the front part of the connector may jut out as shown in the drawing.

However there is no problem using the unit.

Except for United Kingdom

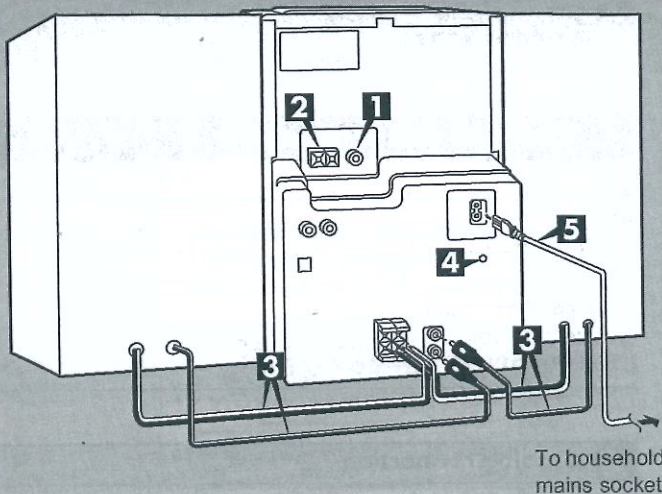
Use the adaptor (included) if the plug does not fit your socket.

Note

The included AC mains lead is for use with this unit only. Do not use it with other equipment.

For your reference

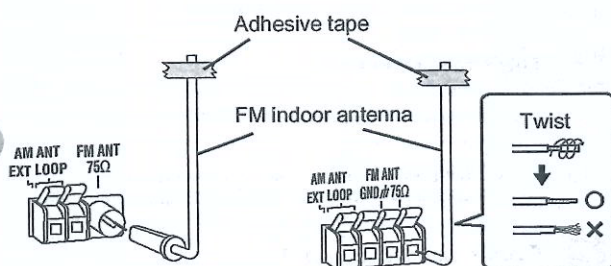
Information you enter into the unit's memory, except for time, remains intact for up to two weeks after the mains lead is disconnected.



1

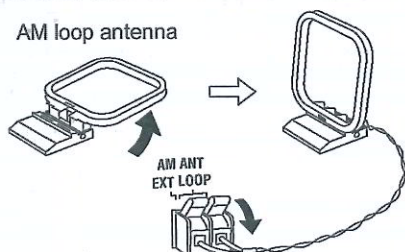
For United Kingdom

For others

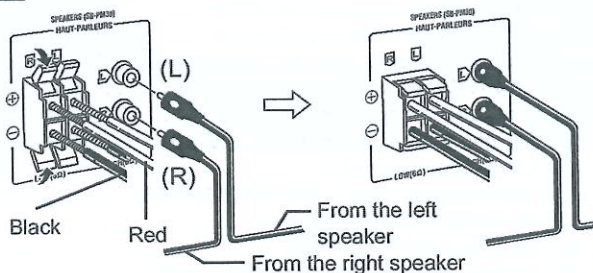


2

AM loop antenna

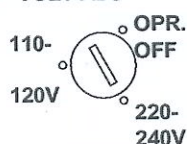


3



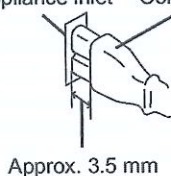
4

VOLT ADJ



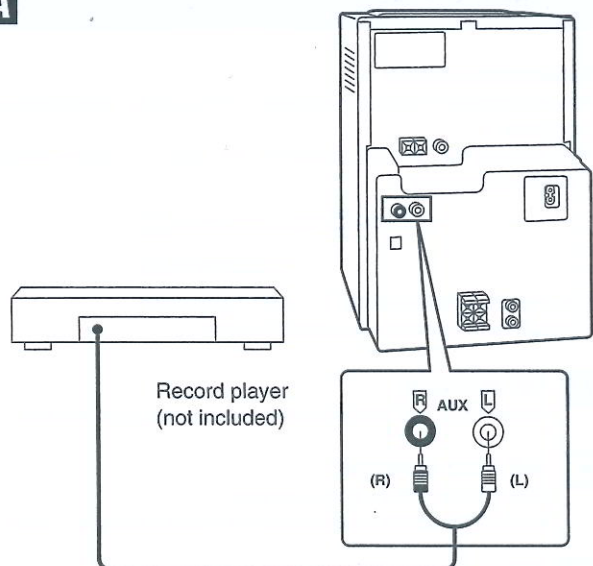
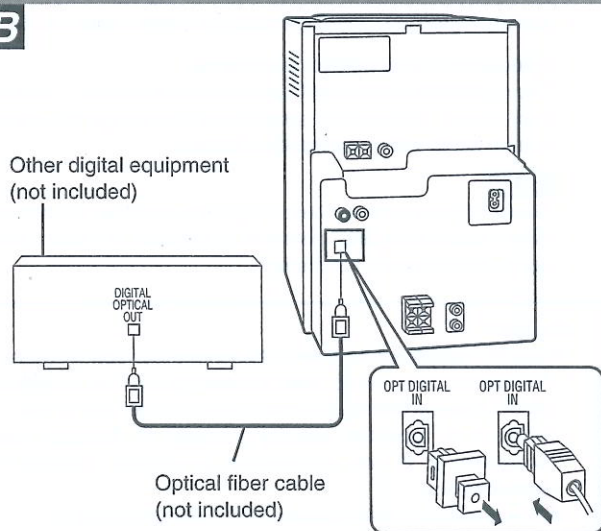
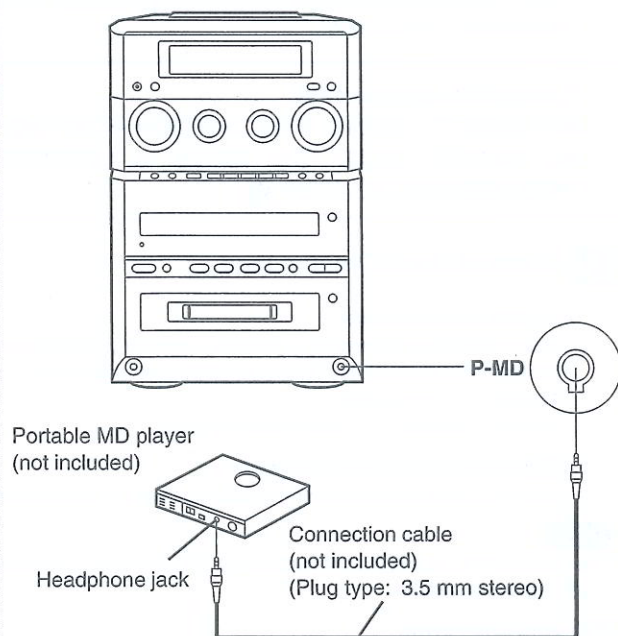
5

Appliance inlet Connector



A



A**B****C****Connections****External unit connections**

- Turn off all units before making connections.
- Refer to the manual of the other unit for details. (Cables and equipment not included.)

Stereo phono cable (not included)

White (L)
Red (R)

**A Analog connection**

The example in the illustration shows connection of a record player with a built-in phono equalizer. When connecting a record player other than this type, consult your audio dealer.

B Digital connection

Remove the dust cap before use.

Use an optical fiber cable to connect a digital equipment to DIGITAL IN. This connection enables you to make digital recordings. Use analog connection to make analog recordings.

C Connecting a portable MD player

You can make analog recordings of sound from a portable MD player.

Connect the unit to the headphone jack of the portable MD player.

Note

Do not put the portable MD player on top of this unit when recording. This can cause noise.

Optional antenna connections

Use outdoor antennas if radio reception is poor.

A FM outdoor antenna

- Disconnect the FM indoor antenna.
- The antenna should be installed by a competent technician.

B AM outdoor antenna

Run a piece of vinyl wire horizontally across a window or other convenient location.
Leave the loop antenna connected.

Note

Disconnect the antenna when the unit is not in use. Do not use the antenna during an electrical storm.

The remote control

C Batteries

Insert so the poles (+ and -) match those in the remote control.

Do not:

- mix old and new batteries.
- use different types at the same time.
- heat or expose to flame.
- take apart.
- short circuit.
- attempt to recharge alkaline or manganese batteries.

Mishandling of batteries can cause electrolyte leakage which can damage items the fluid contacts and may cause a fire.

If electrolyte leaks from the batteries, consult your dealer.

Wash thoroughly with water if electrolyte comes in contact with any part of your body.

Do not use rechargeable type batteries.

Remove if the remote control is not going to be used for a long period of time. Store in a cool, dark place.

Replace if the unit does not respond to the remote control even when held close to the front panel.

D Use

Aim at the sensor, avoiding obstacles, at a maximum range of 7 meters directly in front of the unit.

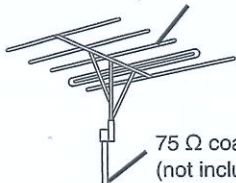
- Keep the transmission window and the unit's sensor free from dust.
- Operation can be affected by strong light sources, such as direct sunlight, and the glass doors on cabinets.

Do not:

- put heavy objects on the remote control.
- take the remote control apart.
- spill liquids onto the remote control.

A

FM outdoor antenna
(not included)

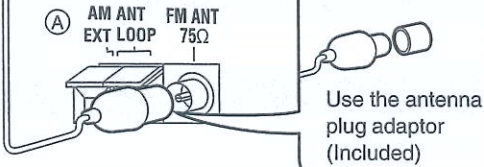


75 Ω coaxial cable
(not included)

For United Kingdom

AM ANT
EXT LOOP

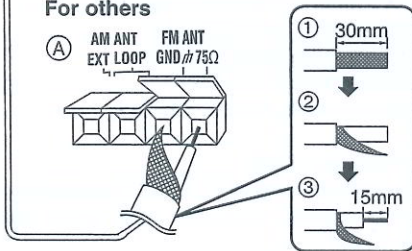
FM ANT
75 Ω



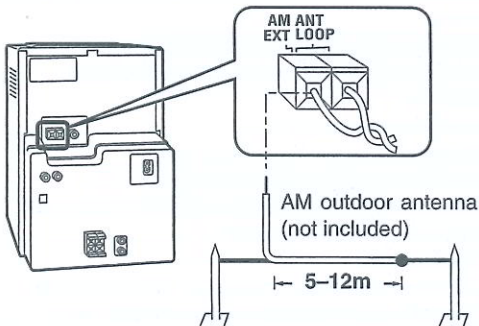
For others

AM ANT
EXT LOOP

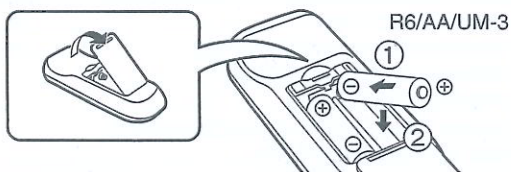
FM ANT
GND \neq 75 Ω



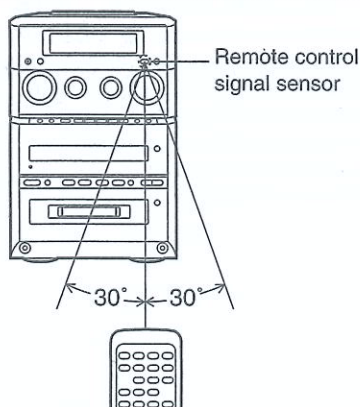
B

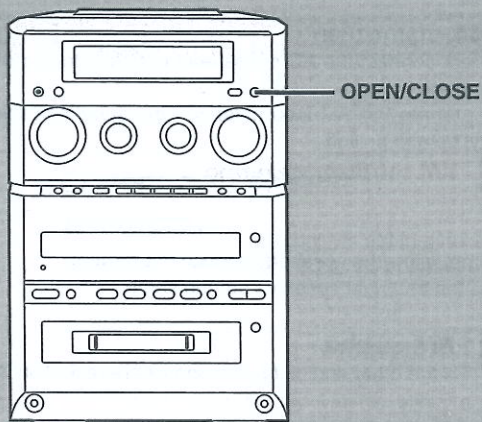
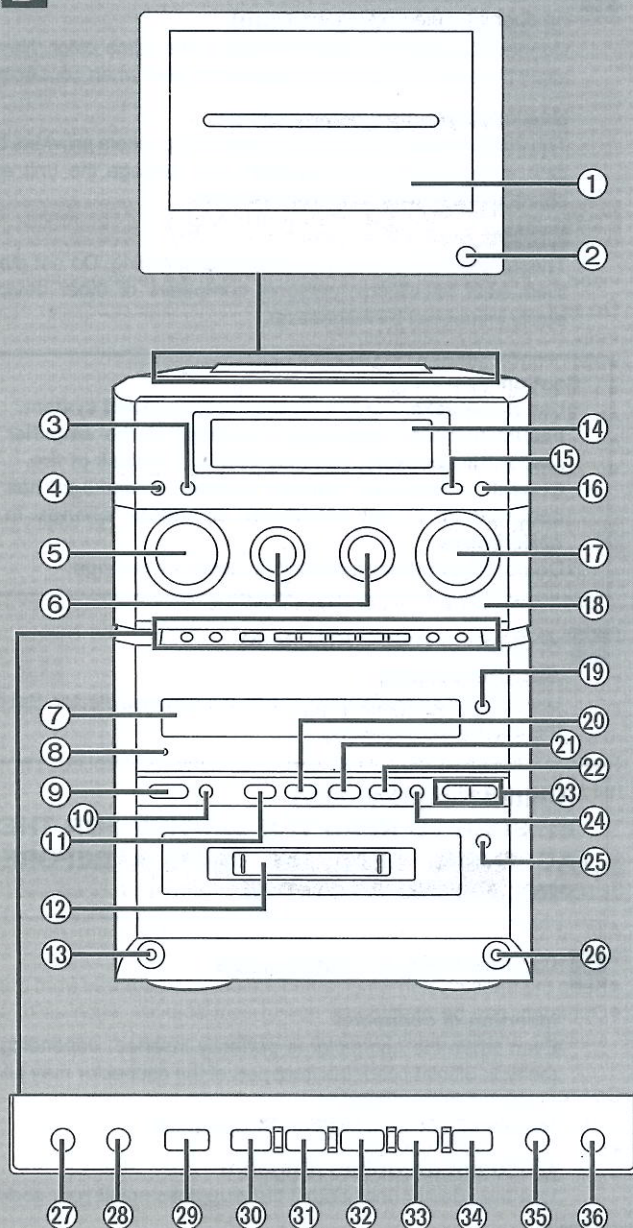


C



D



A**B****A The glide panel**

When the unit is turned on, the glide panel retracts automatically, enabling access to the operation buttons.

When the unit is turned off, the glide panel closes automatically.

To open/close the glide panel manually

Press [OPEN/CLOSE] when the unit is on.

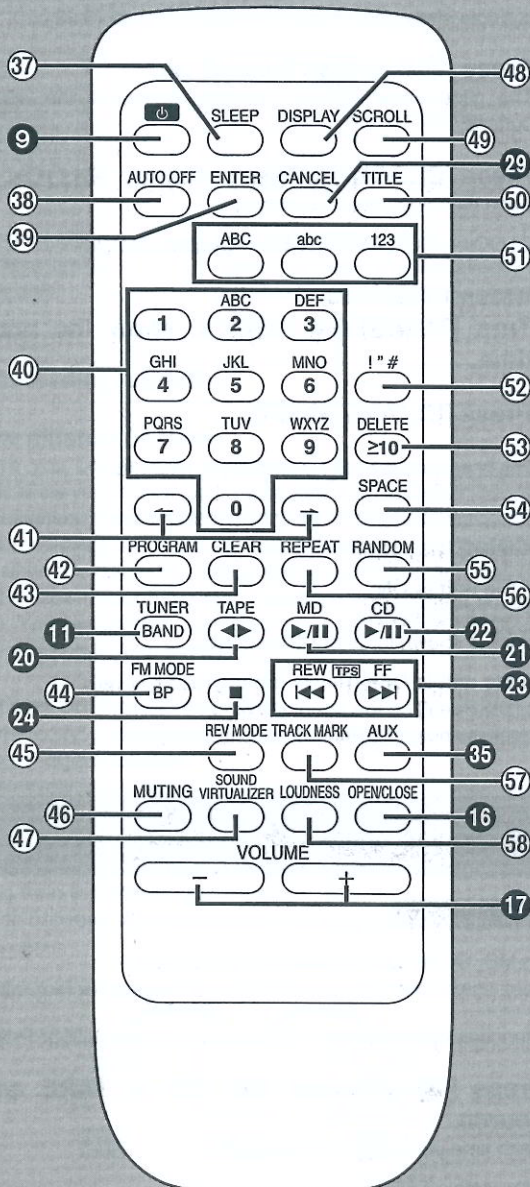
The display dims when the glide panel is closed manually.

Front panel controls**B Main unit**

- ① Cassette holder
- ② Cassette holder open button (▲, OPEN) 18
- ③ Clock/timer button (CLOCK/TIMER) 10, 37, 38
- ④ Play/record timer button and indicator
(⊖ PLAY/⊕ REC) 37, 38
- ⑤ Tune/time adjust control
(TUNE/TIME ADJ) 10, 16, 33, 34
- ⑥ Bass/treble controls (BASS, TREBLE) 10
- ⑦ CD tray
- ⑧ Standby indicator (⊖/⊕)
When the unit is connected to the AC mains supply, this indicator lights red in standby mode and lights green when the unit is turned on.
- ⑨ Standby/on switch (⊖/⊕) 10
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
- ⑩ Power saving mode button (MODE) 9
- ⑪ Tuner/band select button (TUNER/BAND) 16
- ⑫ MD slot
- ⑬ Headphone jack (⌀) 41
- ⑭ Display
- ⑮ Remote control signal sensor 7
- ⑯ Glide panel open/close button (OPEN/CLOSE) 8
- ⑰ Volume control (VOLUME) 12
- ⑱ Glide panel
- ⑲ CD tray open/close button (▲, OPEN/CLOSE) 13
- ⑳ Cassette play/direction button (TAPE ◀▶) 18
- ㉑ MD play/pause button (MD ▶/⏸) 12
- ㉒ CD play/pause button (CD ▶/⏸) 13
- ㉓ Disc skip/search, tape fast forward/rewind, TPS button
(◀◀/REW, FF/▶▶) 12, 13, 19, 31
- ㉔ Stop/function select button (■) 12, 13, 14, 18
- ㉕ MD eject button (▲, EJECT) 12
- ㉖ P-MD terminal (P-MD) 6
- ㉗ Memory/enter button (MEMORY/ENTER) 17, 25, 30
- ㉘ MD edit button (MD EDIT) 30
- ㉙ Cancel button (CANCEL) 30
- ㉚ MD recording mode select, SP/LP mode select button (MD REC MODE, -SP/LP) 20, 25
- ㉛ MD&TAPE record button (●, MD&TAPE) 22
- ㉜ Tape record/pause button (●/⏸, TAPE) 22
- ㉝ MD record/pause button (●/⏸, MD) 22
- ㉞ CD edit button (CD EDIT) 23
- ㉟ AUX analog/digital select button
(AUX, ANALOG/DIGITAL) 40
- ㊱ P-MD button (P-MD) 41

Remote control

Buttons such as 9 function in the same way as the controls on the main unit.



37	Sleep button (SLEEP)	39
38	Auto power-off button (AUTO OFF)	10
39	Enter button (ENTER)	27
40	Numbered, character buttons (1-9, 0)	14, 17, 28
41	Cursor buttons (←, →)	28
42	Program button (PROGRAM)	15
43	Program clear button (CLEAR)	15
44	FM mode/BP select button (FM MODE, BP)	16, 25
45	Reverse mode select button (REV MODE)	18
46	Muting button (MUTING)	36
47	Sound virtualizer button (SOUND VIRTUALIZER)	35
48	Display select button (DISPLAY)	36
49	Scroll button (SCROLL)	12
50	Title edit button (TITLE)	27
51	Character type select buttons (ABC, abc, 123)	28
52	Symbol button (!" #)	28
53	Delete, ten and over button (≥10, DELETE)	14, 17, 29
54	Space button (SPACE)	29
55	Random button (RANDOM)	14
56	Repeat button (REPEAT)	14
57	Track mark button (TRACK MARK)	22
58	Loudness button (LOUDNESS)	35

A Saving power in standby mode

Set the unit to reduce energy consumption in standby mode.

① Press [⏻/⏻] to turn the unit on.

② Press [MODE].

The current mode is displayed.

③ Within 2 seconds

Press [MODE] to select "ECO".

Each time you press the button;

NORMAL (off) ↔ ECO (on)

ECO: The clock is not displayed in standby mode.

Power consumption—For United Kingdom 0.6 W
For others 1.2 W

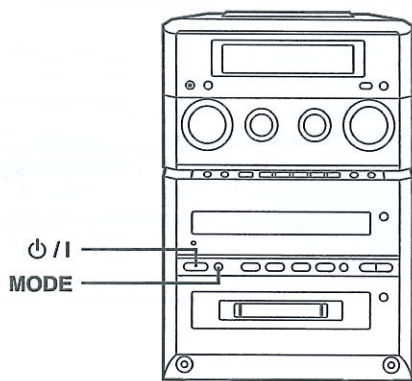
NORMAL: The clock is displayed in standby mode.

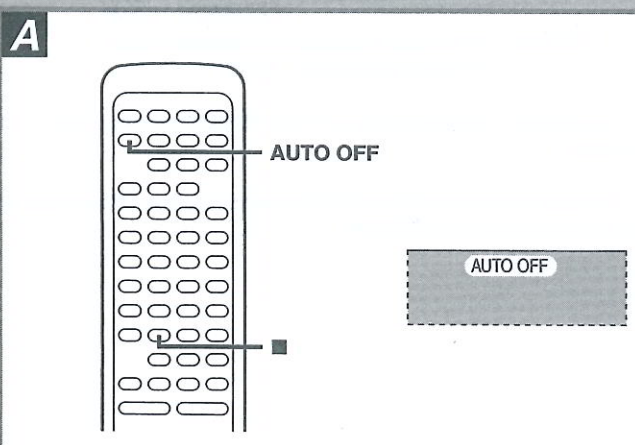
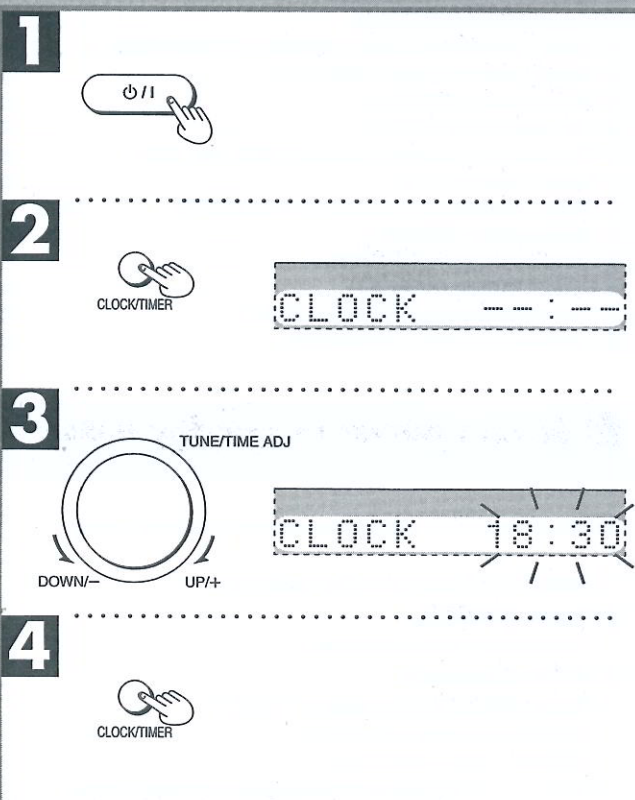
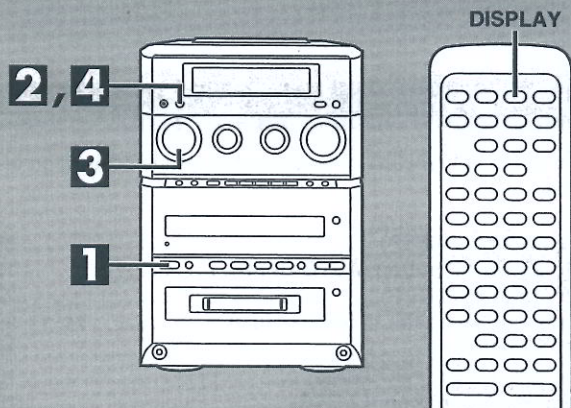
Power consumption—8.5 W

The standby indicator and the Ⓢ PLAY/Ⓢ REC indicator light in both modes.

The mode can be switched to ECO when the unit is off but it can not be switched back to NORMAL.

A





Setting the time

This is a 24-hour clock.

The example shows how to set the clock for 18:30 (6:30 pm).

- 1 Press [I/O] to turn the unit on.**
The glide panel retracts enabling access to the operation buttons.
- 2 Press [CLOCK/TIMER] to display "CLOCK".**
Each time you press the button;
CLOCK → ⏻ PLAY → ⏻ REC → Original display
- 3 Within 10 seconds**
Turn [TUNE/TIME ADJ] to show the present time.
- 4 Press [CLOCK/TIMER].**

The time is set and the original display is restored.

Displaying the clock

When the unit is ON:

Press [CLOCK/TIMER].

The clock is shown for about 10 seconds.

When the unit is OFF (Power saving mode is on):

Press [DISPLAY] on the remote control.

The clock is shown for about 5 seconds.

A Auto power-off

Remote control only

When MD, CD or tape is selected as the source

To save power, the unit turns off if it is left unused for four minutes.

This function does not work if the source is tuner, AUX or P-MD.

- ① Press [■] to select MD, CD or TAPE as the source.**
Each time you press the button;
CD → MD → TAPE
↑
- ② Press [AUTO OFF].**
"AUTO OFF" is displayed.

To cancel

Press [AUTO OFF] again.

For your reference

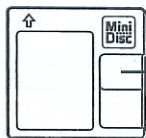
The setting is maintained even if the unit is turned off. When the unit is turned on again, the unit functions as described above.

If you select tuner, AUX or P-MD as the source, "AUTO OFF" goes out. It comes on again when you select MD, CD or tape.

Types of MDs



Prerecorded MDs
These discs are for playback only.



Recording MDs
Apart from the time limitations, it is possible to record up to 254 tracks on an MD.

Recording on MDs

MDs are different to tapes

MDs give you control over how tracks are recorded and editing functions allow you to change the contents of an MD after recording. Unlike cassettes, it is not necessary to find an empty portion to record onto. All recordings start from the first available space. The MD fills up and when the disc is full, either because the time limit has been reached or 254 tracks have been recorded, recording is no longer possible. You can use the editing functions to erase and move your recordings around within the MD.

Limitations on digital recording

The serial copy management system (SCMS) prevents unlimited recording of digital material.

Clear, relatively intact, digital recordings can be made when recording a CD in this unit or from another digital unit connected by an optical fiber cable to an MD in this unit. So to protect the rights of the producer of the original material, it is not possible to make a further recording from that MD to another MD.

Recording between MDs connected by analog means are unlimited by this system.



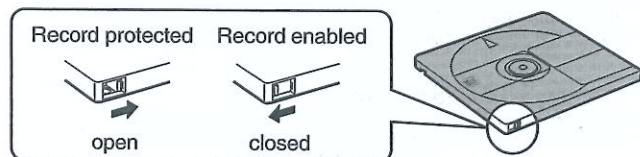
Stereo and monaural recording

This unit is capable of recording in stereo or monaural and can playback MDs recorded in stereo or monaural.

Monaural recording allows approximately twice the amount of material to be recorded and played back, but sound quality is affected.

Protecting your recordings

Move the switch to open the write protect hole. Close the hole when you want to record or edit the MD again.



Glossary of terms

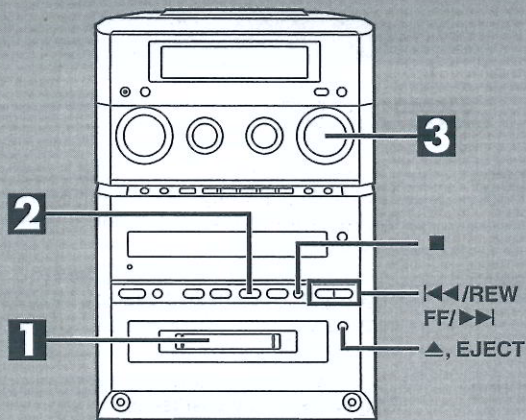
Analog	This is the method that records and cassettes use to handle sound signals. It is possible to make analog recordings with MDs.
Digital	This is the usual method used by MDs and CDs to carry and record sound signals. Digital recording can be of very high quality.
Editing	This refers to any post-recording changes made to the MD.
Marking	This is the act of adding track marks. It can be done automatically when recording, or it can be done manually during recording or after recording with the editing functions.
TOC	Table of contents. Information stored on the MD about the tracks and times.
Track marks	These marks separate tracks. There can be up to 254 marks on one MD. They can be inserted automatically or manually during recording, and they can be added or removed with the editing functions after recording.
UTOC	User table of contents. This is information the user can edit, such as text and track positions. The message "UTOC Writing" appears on the display after recording and editing.

Care and storage

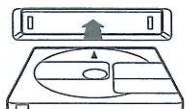
Label MDs only as recommended. Extra labels and exposed adhesive can cause malfunctions.

Do not open the shutter, and close it immediately if it accidentally opens. Never touch the disc inside the MD cartridge.

Keep your MDs out of direct sunlight, humid and dusty places, and away from the direct heat of heating appliances.



1



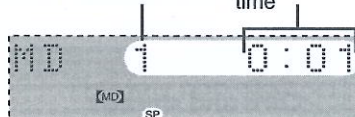
Total number of tracks Total playing time



2

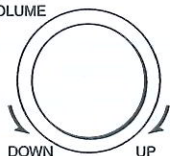


Track number Elapsed play time



3

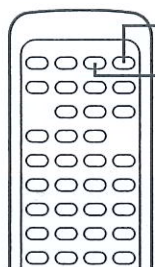
VOLUME



(a)



A



SCROLL

DISPLAY

MDs

1 Insert the MD.

The unit comes on automatically and if MD is selected as the source, the message "TOC Reading" appears on the display, then any text information about the disc is shown.

2 Press [MD >||] to start play.

When the track is recorded in SP mode (normal recording): "SP" lights.

When the track is recorded in LP mode (long play recording in monaural): "LP" lights.

3 Adjust the volume.

To stop the disc

Press [■].

To pause play

Press [MD >||] during play. Press [MD >||] again to resume play.

To eject the MD

Press [▲, EJECT].

When ">>" is displayed (a)

There are 16 or more tracks on the disc.

Skipping tracks

Press [◀◀/REW] (backward) or [FF/▶▶] (forward).

Searching through tracks

During play

Press and hold [◀◀/REW] (backward) or [FF/▶▶] (forward).

Note

- You cannot skip to tracks already played in random play (⇒ page 14).
- Skipping is done in the selected order in program play (⇒ page 15).
- You can search only within tracks in random play.

One touch play

When an MD is loaded and the unit is off, press [MD >||]. The unit comes on and starts play.

A Scrolling titles

You can scroll the titles on MDs across the display.

Press [SCROLL] on the remote control.

While the disc is stopped:

The disc title scrolls across the display once.

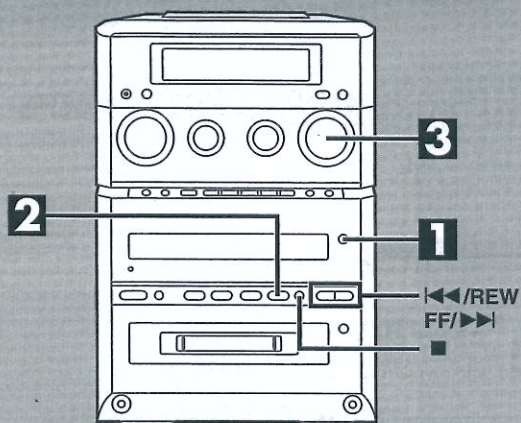
While a track is selected or playing:

The track title scrolls across the display once.

To display a title continuously

Press [DISPLAY] on the remote control and display the title.

To restore the original display, press [DISPLAY] again.



1 Press [**▲**, OPEN/CLOSE] to open the tray.

The unit comes on automatically.

Set a CD label up on the tray.

Press [**▲**, OPEN/CLOSE] to close the tray.

If "CD" is selected as the source, the message "TOC Reading" appears on the display then the number of tracks and playing time are displayed.

2 Press [CD ▶/||] to start play.

3 Adjust the volume.

To stop the disc

Press [**■**].

To pause play

Press [CD ▶/||] during play. Press [CD ▶/||] again to resume play.

When "➤" is displayed (a)

There are 16 or more tracks on the disc.

Skipping tracks

Press [**◀**/REW] (backward) or [FF/▶] (forward).

Searching through tracks

During play

Press and hold [**◀**/REW] (backward) or [FF/▶] (forward).

Note

- You cannot skip to tracks already played in random play (⇒ page 14).
- Skipping is done in the selected order in program play (⇒ page 15).
- You can search only within tracks in random and program play.

One touch play

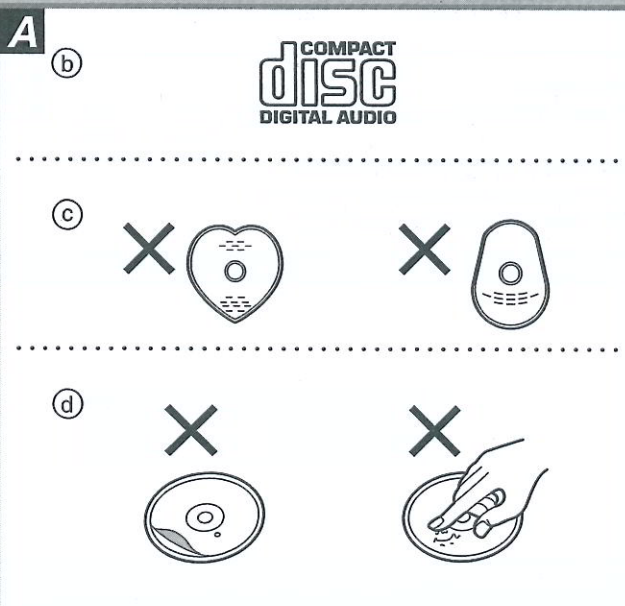
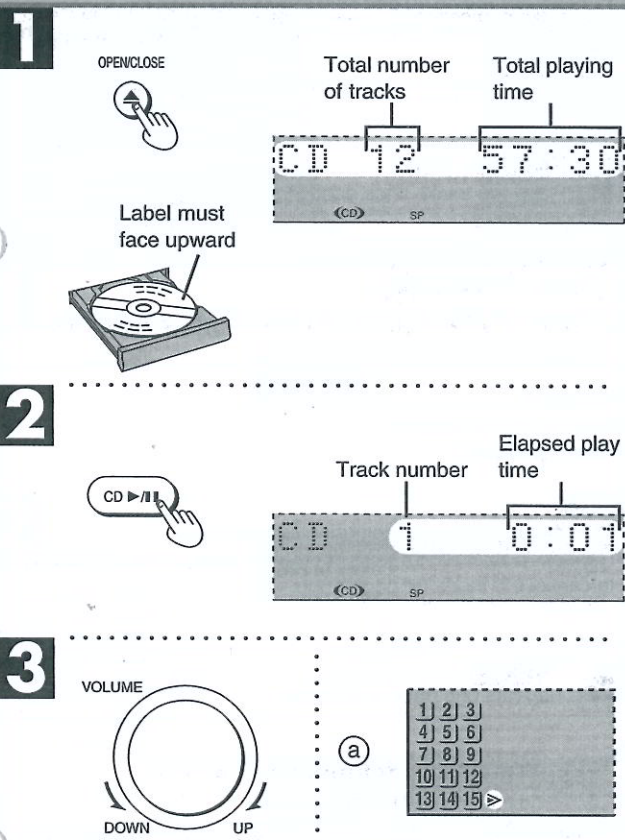
When a CD is loaded and the unit is off, press [CD ▶/||]. The unit comes on and starts play.

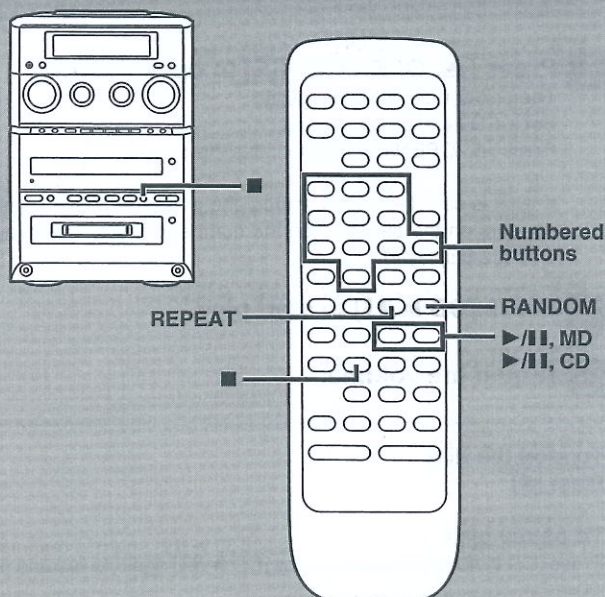
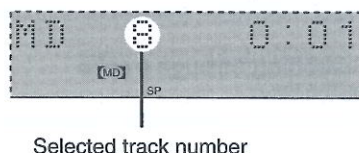
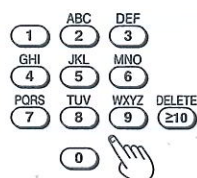
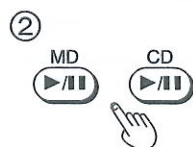
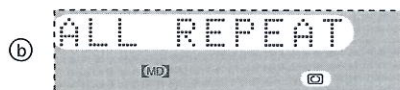
A CD selection and care

Choose discs with this mark: (b)

Do not:

- use irregularly shaped discs. (c)
- attach extra labels and stickers.
- use discs with labels and stickers that are coming off or with adhesive exuding from under labels and stickers. (d)
- attach scratch-proof covers or any other kind of accessory.
- write anything on the CD.
- clean CDs with liquids. (Wipe with a soft, dry cloth.)



**A****B****C**

Other MD and CD functions

Preparation:

Press [■] to select MD or CD as the source.

Each time you press the button;

CD→MD→TAPE

Remote control only

A Direct play:

Starts normal play from a selected track

Select the track with the numbered buttons.

For tracks numbered 10 and over, press [≥10] then the two digits.

For tracks numbered 100 and over, press [≥10] twice then the three digits (MD only).

e.g. To select track no. 132: [≥10]→[≥10]→[1]→[3]→[2]

B Random play:

Plays the tracks once each in random order

While the disc is stopped

① Press [RANDOM].

② Press [▶/II, MD] or [▶/II, CD] to start play.

To cancel

While the disc is stopped

Press [RANDOM].

Note

- MD editing is not possible during random play.
- Random play does not work in program mode. Press [PROGRAM] to cancel the mode (⇒ page 15).

C Repeat:

Repeats one track or all tracks

Press [REPEAT] before or during play.

Each time you press the button;

TRACK REPEAT (1-[▶/II])→ALL REPEAT([▶/II])→Original display

- ① TRACK REPEAT (1-[▶/II]): Repeat only one track
- ② ALL REPEAT ([▶/II]): Repeat all tracks

To cancel

Press [REPEAT] to clear "1-[▶/II]" or "[▶/II]".

To repeat programmed tracks

- ① Program desired tracks (⇒ page 15).
- ② Press [REPEAT] to select "[▶/II]".

Remote control only

Program play:

Select up to 24 tracks to play in the order you choose

Preparation:

Press [■] to select MD or CD as the source.

Each time you press the button;

CD→MD→TAPE

1 While stopped
Press [PROGRAM].

2 Enter the track number with the numbered buttons.

For tracks numbered 10 and over, press [≥10] then the two digits.

For tracks numbered 100 and over, press [≥10] twice then the three digits (MD only).

Repeat this step to program the tracks in the required order.

3 Press [▶/II, MD] or [▶/II, CD].

All the selected tracks are played in the selected order.

To cancel program play

While "MD PGM" or "CD PGM" is displayed (a)*

Press [PROGRAM].

Programmed contents will be saved in memory.

To check the contents of the program

While "MD PGM" or "CD PGM" is displayed (a)*

Press [◀, REW] or [▶, FF]. The track numbers and program positions are displayed in order.

*To display "MD PGM" or "CD PGM", press [▶/II, MD] or [▶/II, CD] then press [■].

To add to the end of the program

While stopped

Repeat step 2.

To clear the tracks

While stopped

Press [CLEAR].

"PGM CLEAR" is displayed and all the tracks are cleared.

"PROGRAM FULL" is displayed

24 tracks have been programmed.

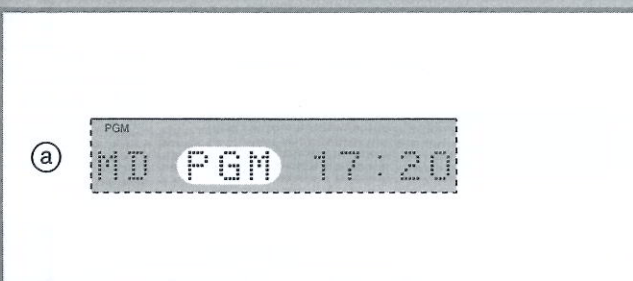
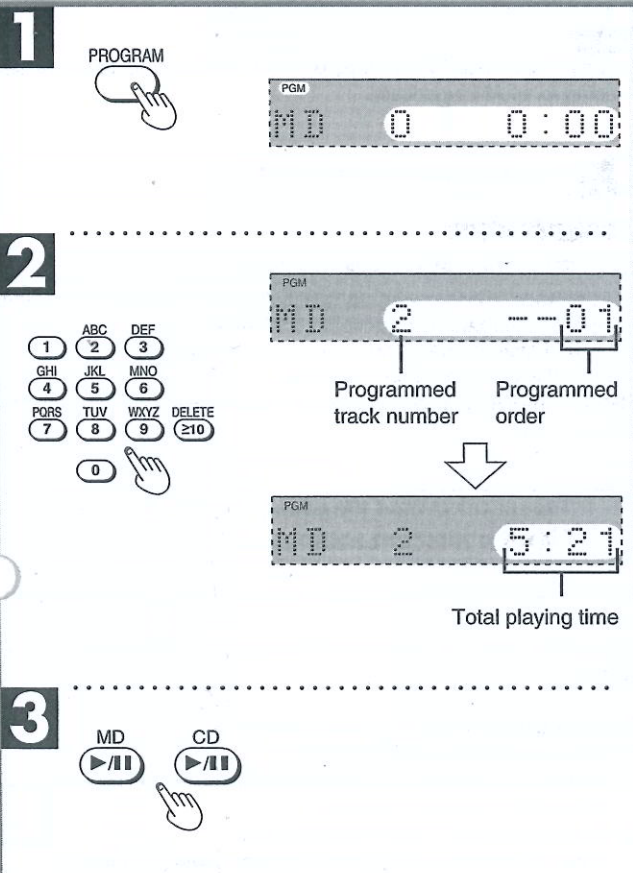
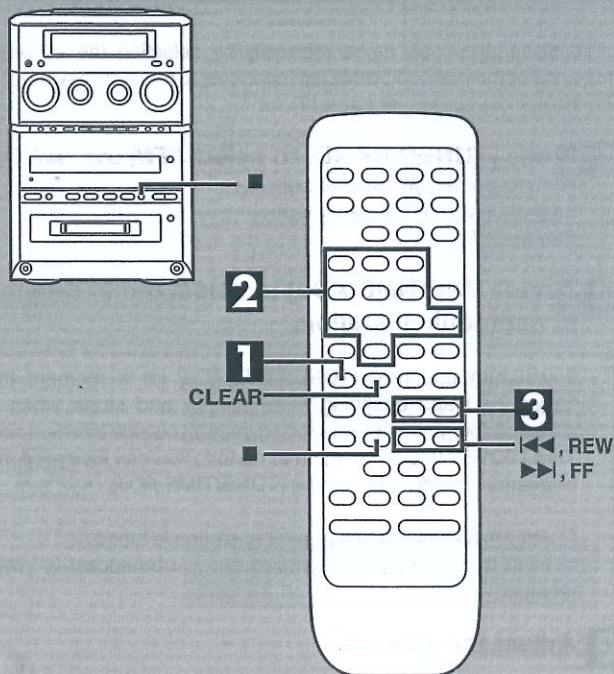
"--:--" is displayed

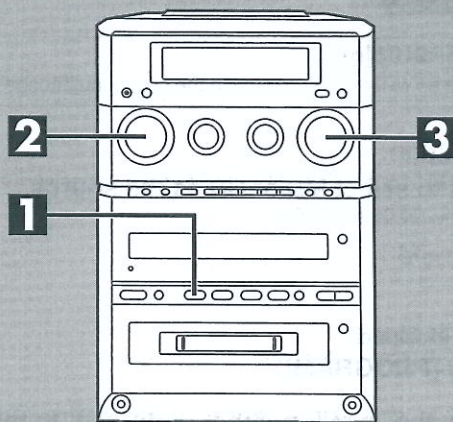
Total playing time for the tracks is over 249 minutes and 59 seconds. Tracks can be still programmed and played.

Note

•MD editing is not possible during program play.

•Program play does not work in random mode. Press [RANDOM] to cancel the mode (⇒ page 14).

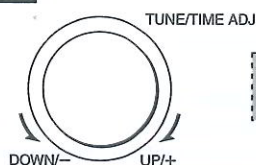




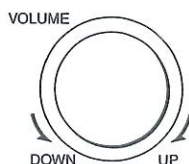
1



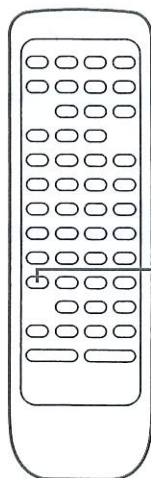
2



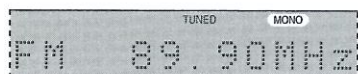
3



A



FM MODE, BP



The radio: manual tuning

Radio stations can be tuned manually by selecting the station's frequency or they can be preset into channels to make it easy to tune with the remote control (→ page 17).

1 Press [TUNER/BAND] to select "FM" or "AM".

The unit comes on automatically.
Each time you press the button;
FM ↔ AM

2 Turn [TUNE/TIME ADJ] to select the frequency of the required station.

If you turn and hold [TUNE/TIME ADJ] for a moment the frequency starts changing automatically and stops when a station is found. It may also stop if there is outside interference. Turn [TUNE/TIME ADJ] again to restart. You can also stop the frequency changing by turning [TUNE/TIME ADJ].

"TUNED" is displayed when a radio station is tuned.

"STEREO" is displayed when a stereo FM broadcast is being received.

3 Adjust the volume.

Note

Sound is momentarily interrupted if you load/unload tapes while listening to an AM broadcast.

A If noise is excessive in FM

Remote control only

Press [FM MODE, BP] to display "MONO".

This mode improves sound quality if reception is weak for some reason but broadcasts are heard in monaural.

Press [FM MODE, BP] again to cancel the mode.

Leave "MONO" off for normal listening.

Stereo and monaural broadcasts are automatically played as they are received.

(Except for United Kingdom) About allocation settings

Each country allocates broadcast bands according to their particular needs.

This system can also receive AM broadcasts allocated in 10 kHz steps.

To change the step (9 kHz ↔ 10kHz)

① Press and hold [TUNER/BAND].

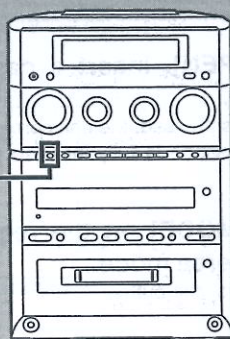
After a few seconds the display changes to a flashing display of the current minimum frequency.

② Continue to hold [TUNER/BAND] down.

When the minimum frequency changes, release the button.

To return to the original step, repeat the above steps.

MEMORY/ENTER

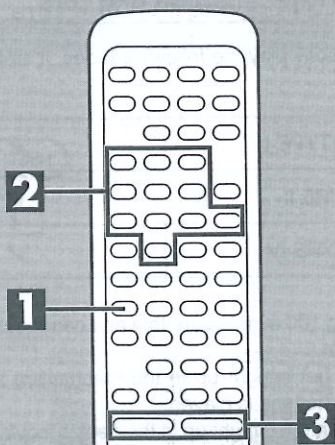


PGM
PROGRAM ch

PGM
AUTO

PGM
FM 1

TUNED STEREO
FM 107.90MHz



TUNER BAND

2



Preset channel

TUNED STEREO
FM 89.90MHz

3

VOLUME



The radio: preset tuning

There are two methods of presetting stations.

Automatic presetting: All the stations the tuner can receive are preset.

Manual presetting: You can select the stations to preset and the order they are preset in.

Up to 15 stations can each be set in the FM and AM bands.

A Automatic presetting

Do the following once each for FM and AM.

Preparation:

Tune to the frequency presetting is to begin at. (→ page 16)

Press and hold [MEMORY/ENTER].

Release the button when "AUTO" appears.

The tuner presets all the stations it can receive into the channels in ascending order. When finished, the last station memorized is tuned in.

Manual presetting

Preset the stations one at a time.

① Tune to the required station.

② Press [MEMORY/ENTER].

③ Within 10 seconds

Enter the preset channel with the numbered buttons on the remote control.

The station occupying a channel is erased if another station is preset in that channel.

B Selecting channels

On the remote control

1 Press [TUNER, BAND] to select "FM" or "AM".

The unit comes on automatically.

Each time you press the button;

FM ↔ AM

2 Press the numbered buttons to select the channel.

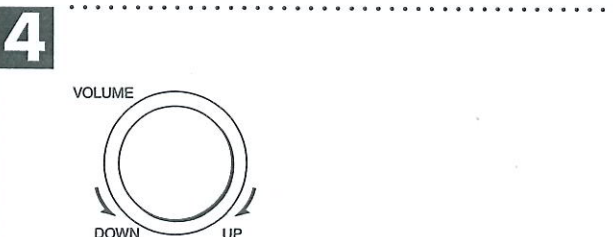
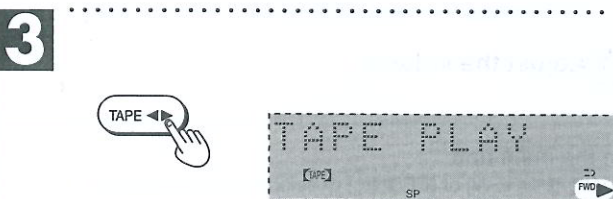
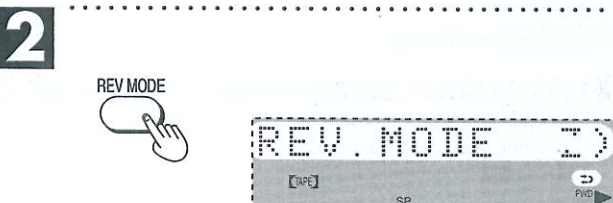
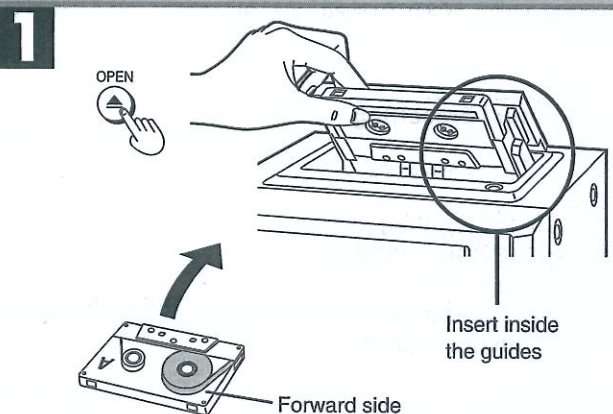
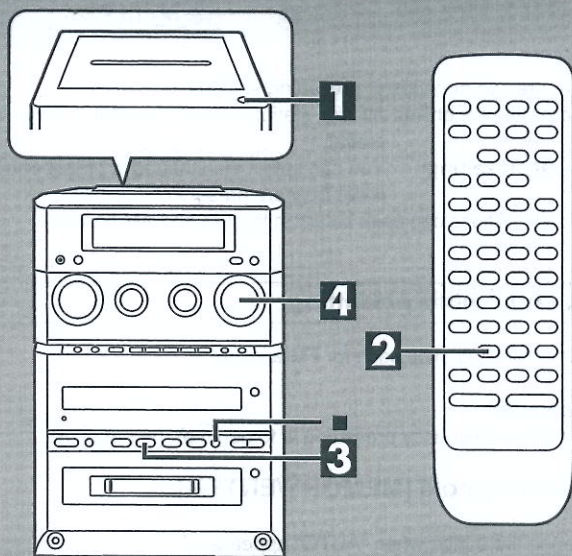
For channels 1 to 9 press the corresponding number.

For channels 10 or over press [≥10], then the two digits.

3 Adjust the volume.

On the main unit

Press [◀/REW] or [FF/▶] to select the preset channel.



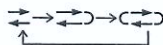
Cassette tapes

1 Press [▲, OPEN], insert a cassette with the tape facing in.

When the button is pressed, the unit comes on automatically. Make sure the cassette is fully inserted and close the lid by hand.

2 Press [REV MODE] on the remote control to select the reverse mode.

Each time you press the button;



→: One side is played.

↔: Both sides are played.

↔↔: Both sides are played repeatedly until [■] is pressed.

3 Press [TAPE ◀▶] to start play.

Each time you press the button;

FWD ▶ ↔ ◀ REV

FWD ▶: to play the forward side

◀ REV: to play the reverse side

4 Adjust the volume.

To stop the tape

Press [■].

One touch play

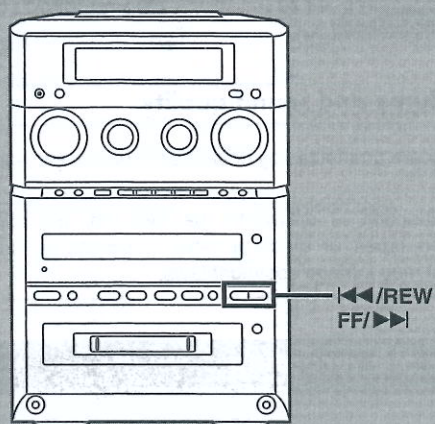
When a cassette is inserted and the unit is off, press [TAPE ◀▶]. The unit comes on and starts play in the direction last selected.

Cassette tape selection and care

The unit can correctly play the following tapes. It identifies the type automatically.

Normal position/TYPE I	✓
High position/TYPE II	✓
Metal position/TYPE IV	✓

- Tapes exceeding 100 minutes are thin and can break or get caught in the mechanism.
- Tape slack can get caught up in the mechanism and should be taken up before the tape is played.
- Endless tapes can get caught up in the deck's moving parts if used incorrectly. Use tapes appropriate to this unit's auto-reverse mechanism.



A Fast-forwarding and rewinding

Press [**REW**] or [**FF**] while the tape is stopped.

To rewind	To fast-forward
REW	FF

B Tape program sensor (TPS)

TPS finds the beginning of a track and resumes play from there.

Press [**REW**] or [**FF**] during playback.

FF: Forward
Play starts from the beginning of the next track.

REW: Backward
Play starts from the beginning of the present track.

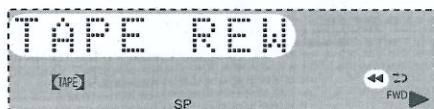
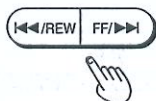
Each press increases the number of tracks skipped, up to a maximum of 9.

Note

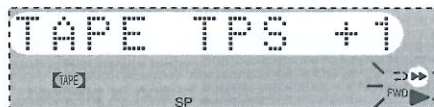
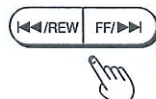
TPS may not operate correctly in the following situations:

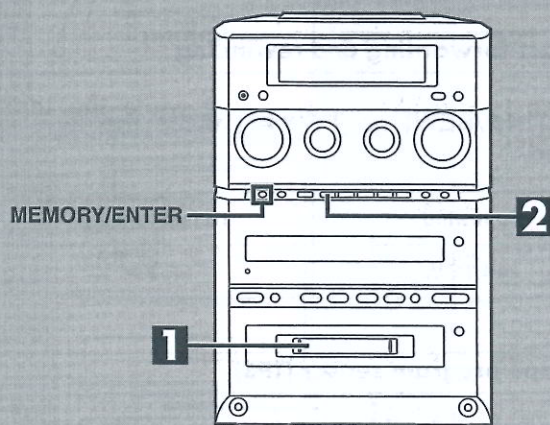
- If the interval between tracks is less than 4 seconds.
- If there is noise between tracks.
- If there are silent parts within tracks.

A

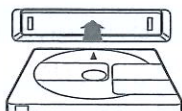


B





1



2



Current mode

LP MODE

LP

A



a

MANUAL

b

SYNCHRO

SYNCHRO

c

TURN BACK

TURN BACK

d

TIME MARK

TIME MARK

e

TURN/TIME

TURN BACK TIME MARK

Before recording

You can use MDs or cassettes to record (**MD REC** **TAPE REC**).
You can also record CDs onto an MD and a cassette at the same time (**MD&TAPE REC**).

Volume and sound quality

Recordings are unaffected by changes to volume and sound quality.

Your attention is drawn to the fact that recording pre-recorded tapes or discs or other published or broadcast material may infringe copyright laws.

For MD recording

Preparatory steps

Do these steps before each recording.

1 Insert an MD.

2 When selecting a source other than MD Press and hold [MD REC MODE, -SP/LP] to select the SP/LP mode.

Each time you press and hold the button;

SP MODE ↔ LP MODE

SP MODE: normal recording (stereo)

LP MODE: long play recording (monaural)

148 minutes worth of material can be recorded onto a 74 minute MD.

A MD recording mode

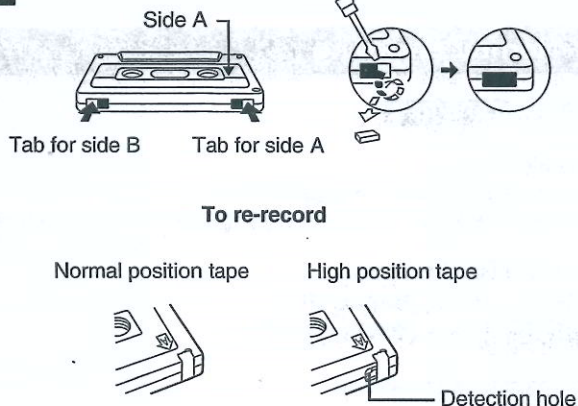
When recording any source except CD

Press [MD REC MODE, -SP/LP] before pressing the recording button to select the mode and press [MEMORY/ENTER] to confirm the selection.

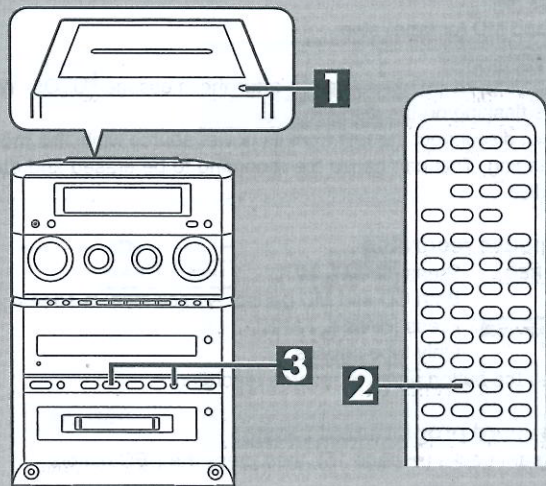
The modes you can choose depend on the source.

- a) **MANUAL:** Insert track marks manually.
- b) **SYNCHRO:** Recording starts automatically when you start play of the source, pauses if a 3-second silence is detected, then starts again when play starts. A track mark is added at the point recording starts. You cannot insert track marks manually.
- c) **TURN BACK:** Records sound received a few seconds before the recording button is pressed. This mode is useful when recording the radio. Track marks can be inserted manually.
- d) **TIME MARK:** Track marks inserted every five minutes. Track marks can also be inserted manually.
- e) **TURN/TIME:** A combination of turn back and time mark.

A



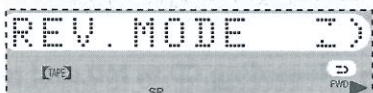
B



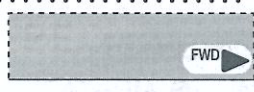
1



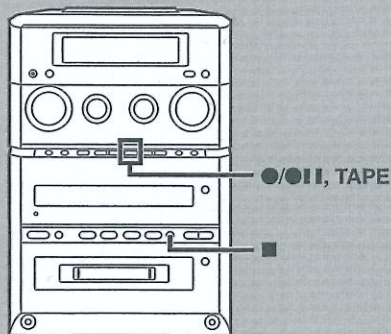
2



3



C



Before recording

For tape recording

Selection of tapes for recording

The unit automatically identifies the type of tape.

Normal position/TYPE I	✓
High position/TYPE II	✓
Metal position/TYPE IV	×

Metal position tapes can be used, but the unit will not be able to record or erase them correctly.

A Erasure prevention for tapes

The illustration shows how to remove the tabs to prevent recording. To record on the tape again, cover as shown, being careful not to cover the high position detection hole.

B Preparatory steps

Do these steps before each recording.

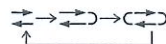
Wind up the leader tape so recording can begin immediately (unnecessary if auto CD editing).

1 Press [▲, OPEN], insert a cassette with the tape facing in.

Make sure the cassette is fully inserted and close the lid by hand.

2 Press [REV MODE] on the remote control to select the reverse mode.

Each time you press the button;



⇄: One side only records.

⇄ and ⇄: Both sides record.

(forward side → reverse side)

"⇄" automatically changes to "⇄" when the REC buttons are pressed.

3 (Unnecessary with auto edit recording, → page 23) Set the tape direction.

FWD▶: To record on the forward side

◀REV: To record on the reverse side

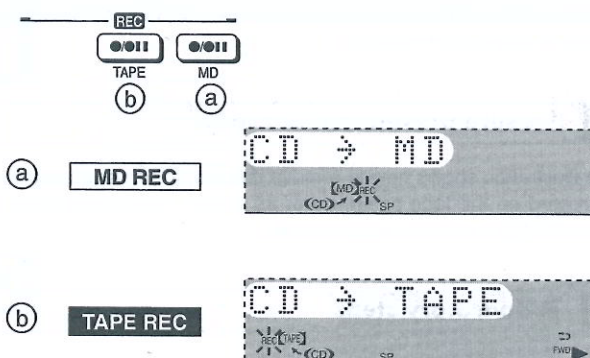
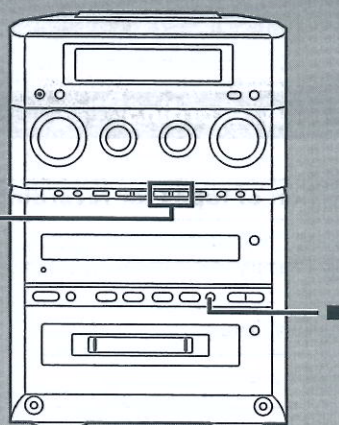
To change the direction

Press [TAPE ◀▶] twice and then [■].

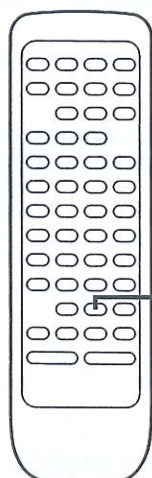
C Erasing recordings on tape

- 1 Press [■] to select TAPE as the source.
- 2 Select the reverse mode.
- 3 Press [●/●II, TAPE].

REC buttons
●/●II, MD
●/●II, TAPE



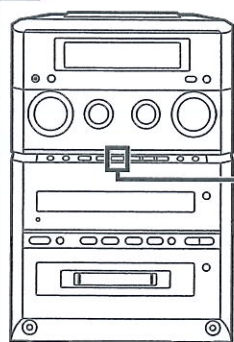
A



TRACK MARK

TR-MARKING

B



●, MD&TAPE

CD → MD&TAPE

Recording CDs

Normal recording

MD REC TAPE REC

Preparation:

Do the preparatory steps. (⇒ pages 20 and 21).

Insert the CD (⇒ page 13) and press [■] to select CD as the source.

Press the REC button.

MD REC: Press [●/●II, MD].

TAPE REC: Press [●/●II, TAPE].

Recording starts automatically.

To stop recording

Press [■].

CD and MD (or tape) stop.

MD REC

Recording on MD is complete after the message "UTOC Writing" stops flashing on the display.

Do not disconnect the unit from its power source while this message is flashing. This can cause the recording to be erased and damage the disc.

To pause recording

MD REC: Press [●/●II, MD].

Both CD and MD pause. A track mark is added.

TAPE REC: Press [●/●II, TAPE].

Only tape pauses.

Press the button again to resume recording.

To record programmed tracks

Program tracks (⇒ page 15), then press the REC button.

A To add track marks while recording on MDs

Press [TRACK MARK] on the remote control where the track mark is required.

These marks can be removed after recording with the editing functions (⇒ "COMBINE", page 32).

B Recording CD to MD and tape at the same time

MD&TAPE REC

Press [●, MD&TAPE].

To stop recording

Press [■].

Note

- Recording on tape is interrupted when the tape reverses.
- If either the MD or tape fills up, recording continues on the other.

Auto edit recording (AUTO REC)

MD REC TAPE REC

This function automatically records all tracks on the CD onto an MD or a tape as long as the remaining time on the MD or tape allows.

You cannot record simultaneously onto an MD and a tape. Auto edit recording is cancelled if you press [●, MD&TAPE] and normal recording starts.

MD REC

- Track marks are automatically inserted.
- A track will not be recorded if remaining time doesn't allow complete recording.

TAPE REC

- Recording begins from the beginning of the forward side. The tape automatically rewinds.
- A track incompletely recorded on the forward side is recorded again on the reverse side.
- The cassette must have tabs for both sides.

Preparation:

Do the preparatory steps (⇒ pages 20 and 21).

Insert CD (⇒ page 13) and press [■] to select CD as the source.

1 Press [CD EDIT] to select "AUTO REC".

Each time you press the button;

AUTO REC → 1-REC → OFF

2 Press the REC button.

MD REC: Press [●/●II, MD].

TAPE REC: Press [●/●II, TAPE].

TAPE REC

The tape automatically rewinds and the tape direction is displayed as "FWD▶".

Recording automatically starts.

Auto edit recording is cancelled after recording.

To stop recording

Press [■].

Both CD and MD (or tape) stop.

MD REC

Recording is complete after the message "UTOC Writing" stops flashing on the display.

Do not disconnect the unit from its power source while this message is flashing. This can cause the recording to be erased and damage the disc.

To record programmed tracks

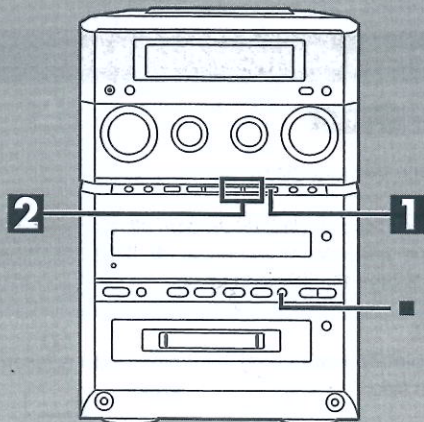
① Program tracks (⇒ page 15).

② Press [CD EDIT] to select "AUTO REC".

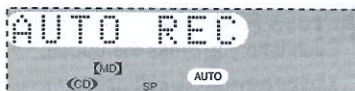
③ Press the REC button.

Note

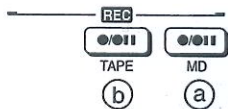
Auto edit recording cannot be used with random and repeat play.



1

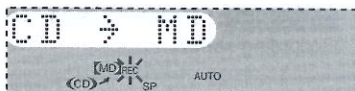


2



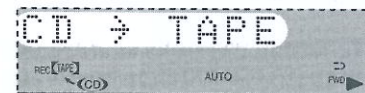
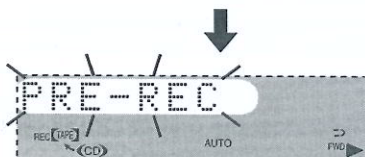
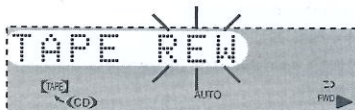
a

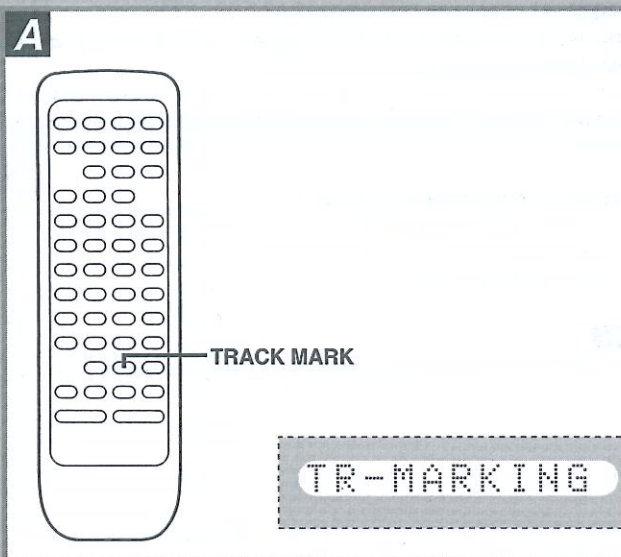
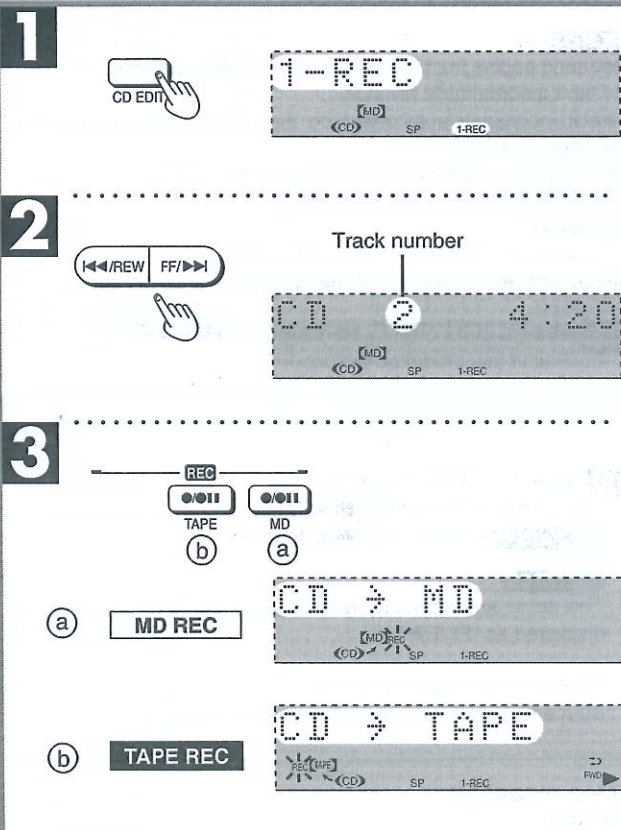
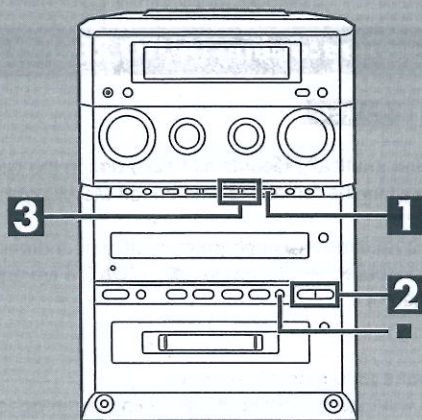
MD REC



b

TAPE REC





Recording CDs

One track edit recording (1-REC)

MD REC TAPE REC

Records one track from a CD.

You cannot record simultaneously onto an MD and a tape. One track edit recording is cancelled if you press [●, MD&TAPE] and normal recording starts from the selected track.

TAPE REC

A track incompletely recorded on the forward side is recorded again on the reverse side.

Preparation:

Do the preparatory steps (⇒ pages 20 and 21).

Insert the CD (⇒ page 13) and press [■] to select CD as the source.

1 Press [CD EDIT] to select "1-REC".

Each time you press the button;

AUTO REC → 1-REC → OFF

2 Press [◀◀/REW] or [FF/▶▶] to select the track to be recorded.

Unnecessary when recording the first track.

3 Press the REC button.

MD REC: Press [●/●II, MD].

TAPE REC: Press [●/●II, TAPE].

Recording starts.

To continue recording with another CD

Replace the CD and repeat steps 2 and 3.

To stop recording

Press [■].

Both CD and MD (or tape) stop.

MD REC

Recording is complete after the message "UTOE Writing" stops flashing on the display.

Do not disconnect the unit from its power source while this message is flashing. This can cause the recording to be erased and damage the disc.

To cancel the one track edit recording

Press [CD EDIT] to select "OFF".

For your reference

If you select one track edit recording when in program mode, the first programmed track will be recorded.

A To add track marks while recording on MDs

Press [TRACK MARK] on the remote control where the track mark is required.

These marks can be removed after recording with the editing function (⇒ "COMBINE", page 32).

Recording the radio

MD REC TAPE REC

Preparation: Do the preparatory steps (→ pages 20 and 21).

1 Tune to the required station.
(→ pages 16 and 17)

MD REC only

2 ① Press **[MD REC MODE, -SP/LP]** to select the desired mode. (→ page 20)
Each time you press the button;

MANUAL→TURN BACK→TIME MARK→TURN/TIME

② Press [MEMORY/ENTER].

MD REC only

3 Press [●/●II, MD] to enter recording standby if you selected “TURN BACK” or “TURN/TIME” in step **2**.

Note

Wait until the “TURN BACK” indicator stops flashing before proceeding to step 4 to start recording. (Turn back may not function correctly if recording is started while the indicator is flashing. (A))

4 Press the REC button to start recording.

MD REC: Press [●/●III, MD].

TAPE REC: Press [●/●II, TAPE].

To stop recording

Press [■].

MD REC

Recording is complete after the message "UTOC Writing" stops flashing on the display.

Do not disconnect the unit from its power source while this message is flashing. This can cause the recording to be erased and damage the disc.

To pause recording

MD REC: Press [●/●II, MD].

A track mark is added.

TAPE REC: Press [●/●■■, TAPE].

TAPE REC. Press [●/●], **TAPE**.
Press the button again to resume recording.

A To add track marks while recording on MDs

Press [TRACK MARK] on the remote control where the track mark is required.

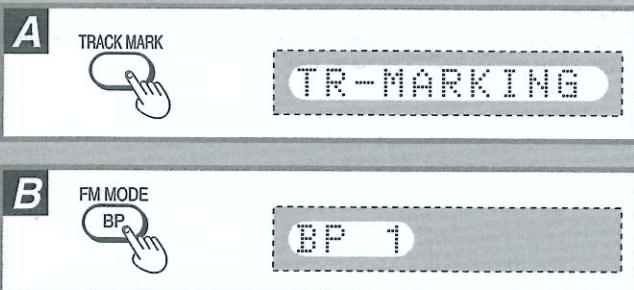
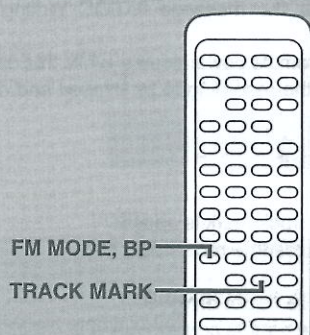
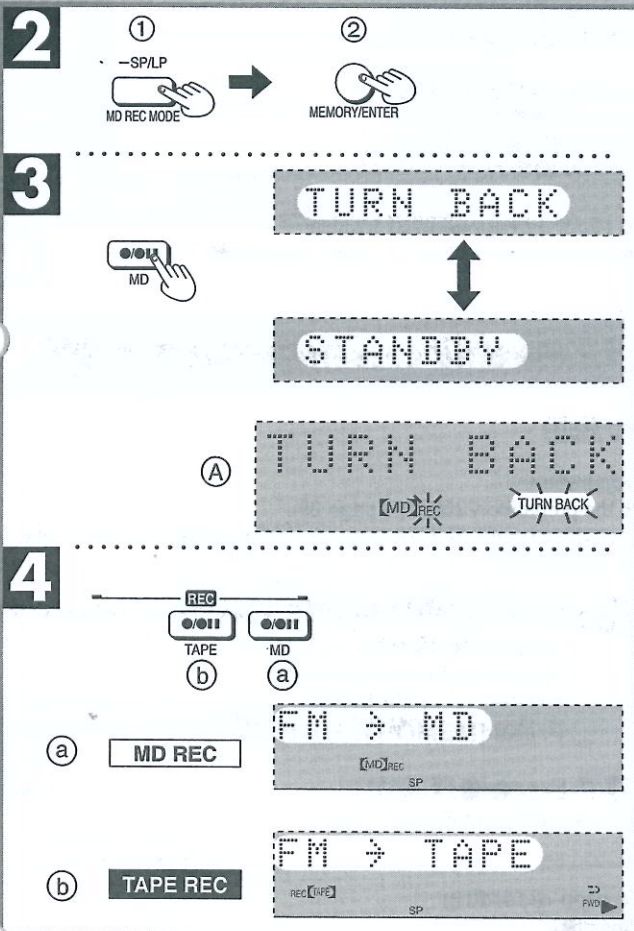
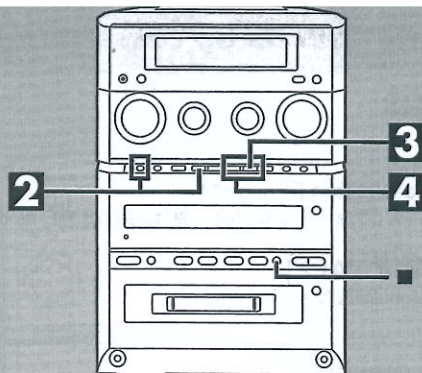
These track marks can be removed after recording with the editing function (⇒ "COMBINE", page 32).

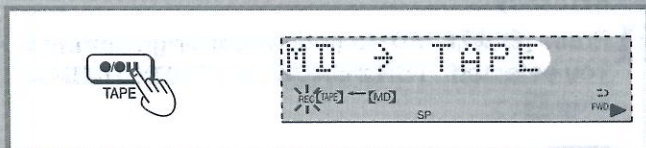
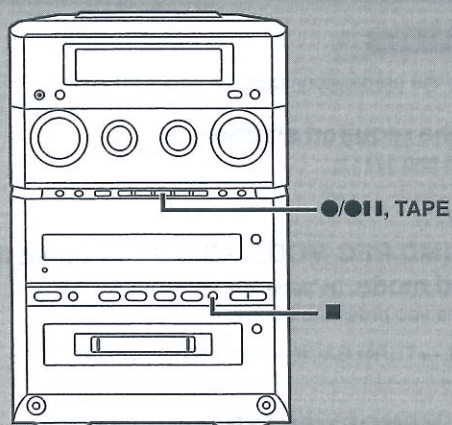
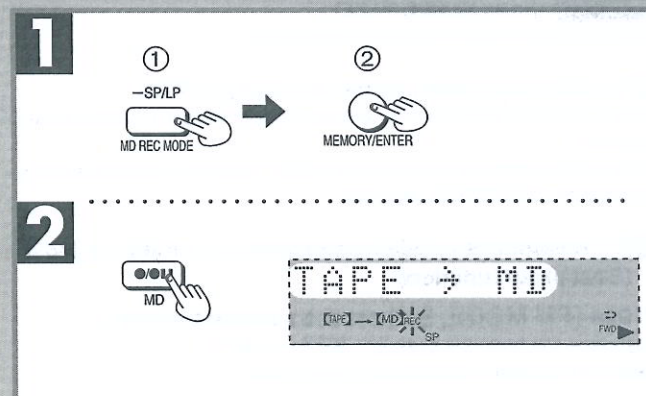
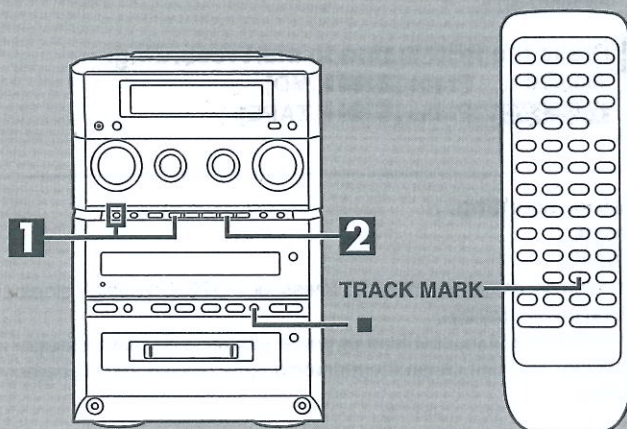
B To reduce noise while tape recording an AM broadcast (Beat proof function)

Press [FM MODE, BP] on the remote control.

Each time the button is pressed; BP 1 \longleftrightarrow BP 2

Select the position where there is less noise.



A**B****A Recording MDs on cassette tapes****TAPE REC****Preparation:**

Do the preparatory steps (⇒ page 21).

Insert the MD (⇒ page 12) and press [■] to select MD as the source.

Press [●/●II, TAPE].

Recording automatically starts.

To stop recording

Press [■].

Both MD and tape stop.

To pause recording

Press [●/●II, TAPE].

Both MD and tape pause.

Press [●/●II, TAPE] again to resume recording.

To record programmed tracks

Program tracks (⇒ page 15), then press [●/●II, TAPE].

B Recording cassette tapes on MDs**MD REC****Preparation:**

Do the preparatory steps (⇒ page 20).

Insert the cassette tape (⇒ page 18) and press [■] to select tape as the source.

1 ① Press [MD REC MODE, -SP/LP] to select MD recording mode. (⇒ page 20)

Each time you press the button;

MANUAL ↔ TIME MARK

② Press [MEMORY/ENTER].**2 Press [●/●II, MD].**

Recording automatically starts.

To stop recording

Press [■].

Both MD and tape stop.

Recording is complete after the message "UTOC Writing" stops flashing on the display.

Do not disconnect the unit from its power source while this message is flashing. This can cause the recording to be erased and damage the disc.

To pause recording

Press [●/●II, MD].

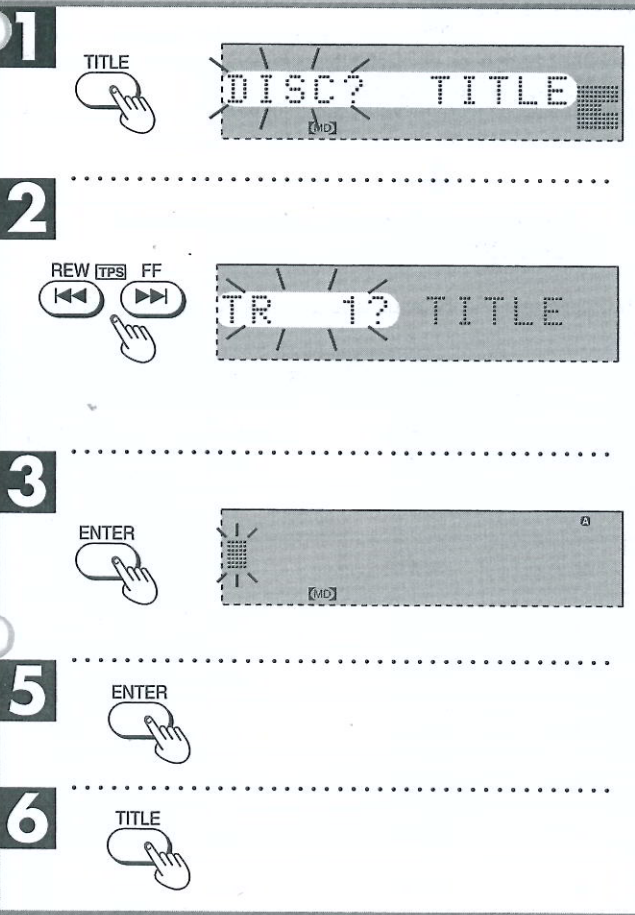
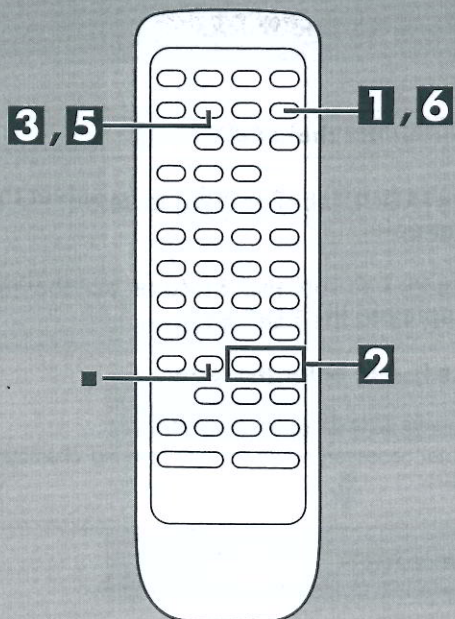
Both tape and MD pause. A track mark is added.

Press [●/●II, MD] again to resume recording.

To add track marks while recording

Press [TRACK MARK] on the remote control where the track mark is required.

These marks can be removed after recording with the editing function. (⇒ "COMBINE", page 32)



MD editing

Titling discs and tracks

Remote control only

Titles of up to 100 characters long can be given to an MD and the tracks on it.

Preparation: Press [■] to select MD as the source.

- 1 While the disc is stopped**
Press [TITLE].
- 2 Press [◀◀, REW] or [▶▶, FF] to select the item to be titled.**
Each time you press the button;
Disc ↔ Track 1 ↔ Track 2 ... ↔ Final track
↑

3 Press [ENTER].

4 Enter the required characters. (⇒ page 28)

5 Press [ENTER].
Titling is complete after the message "UTOC Writing" stops flashing on the display.

Repeat **2** – **5** until all required titles are entered.

6 Press [TITLE].
The previous display is restored.

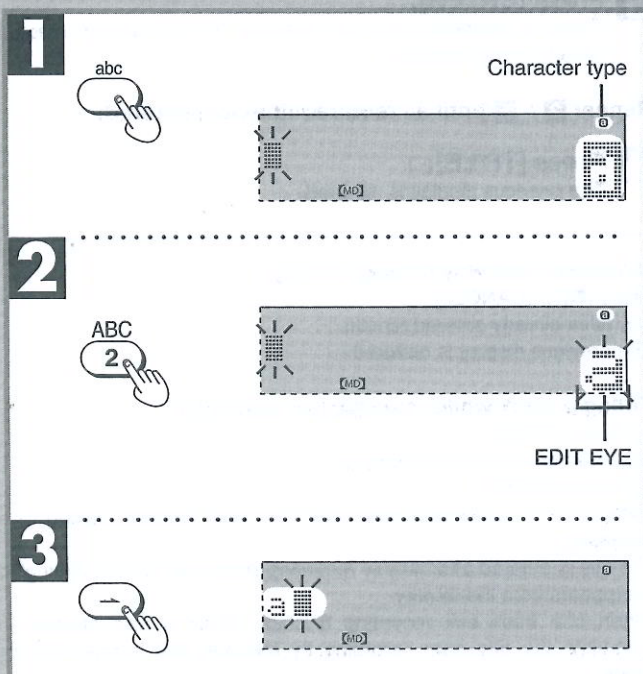
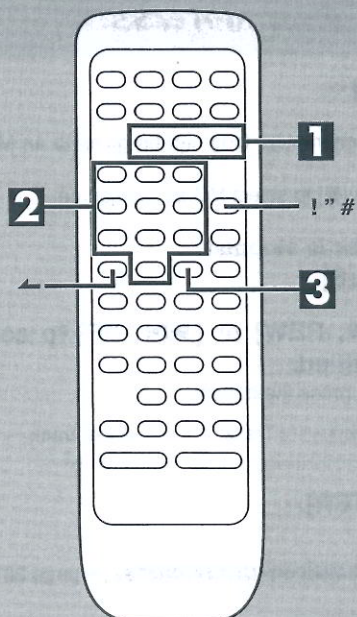
To cancel part way through titling

Press [■] or [CANCEL].
Any titles already entered remain.
The previous display is restored.

Titling a track while recording or playing it

- ① Press [TITLE].
 - ② Enter the required characters.
 - ③ Press [ENTER].
- Titling can be continued even after the track finishes playing or recording.
The title is entered after play or recording stops and "UTOC Writing" disappears from the display.
When one track edit recording finishes, titling is also stopped.
Complete the title after recording by following the normal titling steps.

A maximum of 1200 characters can be entered while recording or playing.



MD editing

Titling discs and tracks

Entering the characters

- 1** Press [ABC], [abc] or [123] to select the type of character.
- 2** Press the numbered buttons so the letter is displayed in the EDIT EYE.
- 3** Press [↵] to enter the letter.

Repeat steps **1** to **3** to complete the title.

Step **1** is not necessary when you are entering characters of the same type.

To enter a space

Press [↵] when no character is in the EDIT EYE.

For your reference

The character in the edit eye is also entered if you press another numbered button or character type button. Another character or character type is then displayed.

If you entered a character by mistake, press [↵] to move back to the mistake, then enter the correct character (⇒ page 29).

Characters allocated to the numbered buttons

The characters change each time a numbered button is pressed.

	Character type		
	Capitals [ABC]	Lower case [abc]	Numbers [123]
1			1
2	ABC	abc	2
3	DEF	def	3
4	GHI	ghi	4
5	JKL	jkl	5
6	MNO	mno	6
7	PQRS	pqrs	7
8	TUV	tuv	8
9	WXYZ	wxyz	9
0			0

To enter symbols

Press [!"/#].

Each time the button is pressed, the symbols are displayed in the EDIT EYE in the following order.

! " # \$ % & ' () * + , - . / : ; < = > ? @ _ `

Titling discs and tracks

Editing titles

To move the cursor

Press [←] or [→].

Replacing letters

Move the cursor over the letter to be replaced.
Now select and enter the new letter (⇒ page 28).

Inserting a letter or space

- ① Move the cursor over the letter to the right of the place where the new letter or space is to go.
- ② Press [SPACE] to insert a space.
- ③ Insert the letter into the space.

Deleting a letter

- ① Move the cursor over the letter to be deleted.
- ② Press [≥10, DELETE].

Making corrections to a title

- ① Select the title to be corrected (⇒ step 1 – 3 on page 27).
- ② Correct the title using the above editing techniques.
- ③ Press [ENTER].

Entering track titles during auto edit recording

Remote control only

You can enter the titles for all the tracks regardless of the track currently recording.

1 While recording Press [TITLE].

After "TITLE INPUT" is displayed, the track numbers on CD and MD are shown.

2 Enter the title. (⇒ page 28)

3 Press [ENTER].

Repeat steps 2 and 3 to enter the other titles.

You can also move to the next track without entering a title by pressing [ENTER].

After entering the last track title, "TITLE WRITE" is displayed and the original display is restored.

Titling is complete after the recording is finished and "UTOC Writing" stops flashing on the display.

To cancel part way through titling

Press [■] or [CANCEL].

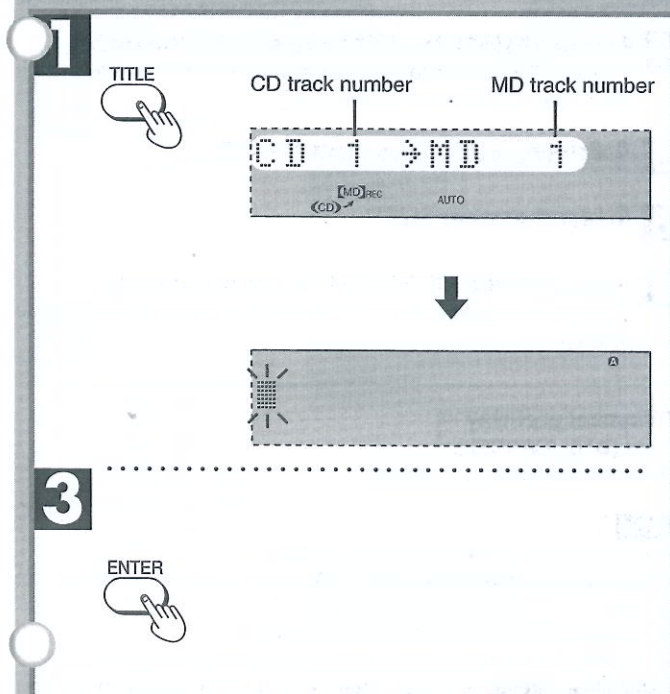
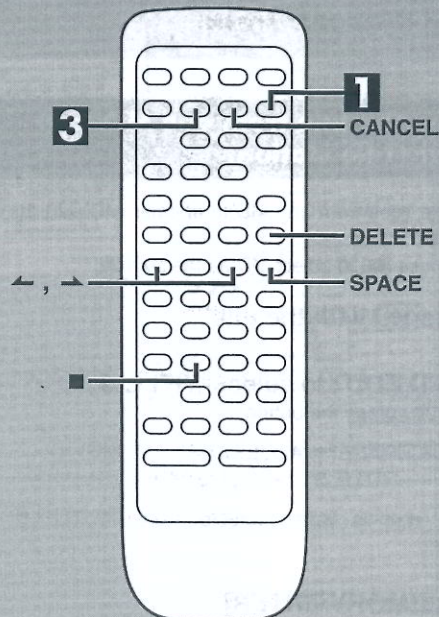
Any titles already entered remain.

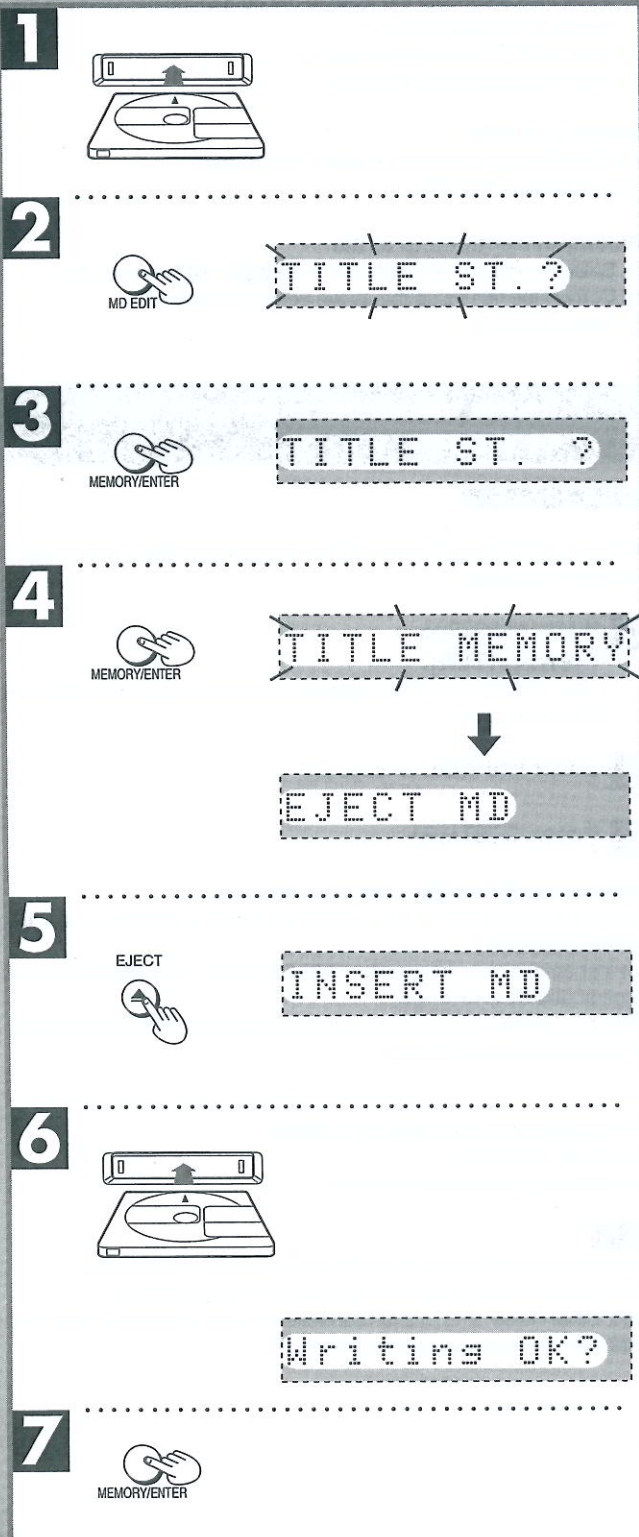
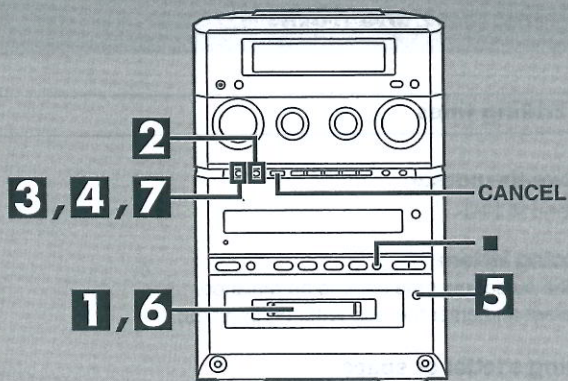
Note

You cannot continue to enter titles once recording is finished.

You cannot move back to a title once you have entered it.

Add other titles and make corrections after recording with the methods described on pages 28 and 29.





MD editing

Titling discs and tracks

Copying the title from one MD to another (Title station)

You can copy the titles from one MD to another MD with the same number of tracks.

Preparation: Press [■] to select MD as the source.

1 Insert the MD with the title.

2 Press [MD EDIT] to select "TITLE ST.?".

Each time you press the button;

→ TRACK ERASE? → ALL ERASE? → MOVE? →
TITLE ST.? ← COMBINE? ←

When the disc is write protected, only "TITLE ST.?" is displayed.

3 Press [MEMORY/ENTER].

4 Press [MEMORY/ENTER] to start the memory. "COMPLETE" is displayed when the unit is finished copying the titles, then "EJECT MD" is displayed.

5 Press [▲, EJECT] to eject the MD.

6 Insert the other MD.

7 Press [MEMORY/ENTER] to start copying. Copying is complete after "UTOC Writing" stops flashing on the display.

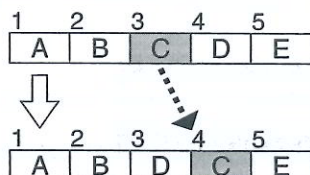
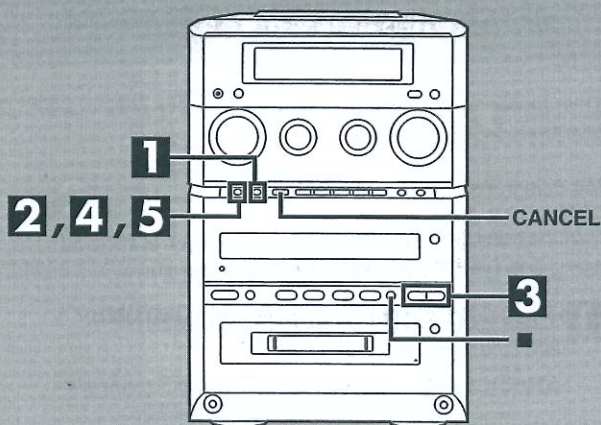
To cancel part way

Press [■] or [CANCEL].

The previous display is restored.

Note

- You cannot copy titles from playback MDs.
- You can only copy titles if both MDs have the same number of tracks.
- The unit can only copy the titles from one MD.
- The title will be lost from the unit's memory if the unit is turned off.
- Any titles already on the other MD will be replaced by this operation.



MD editing

Moving tracks - MOVE

This function allows you to permanently change the order tracks are played in.

Make sure the disc is record enabled.

Play the track you want to move, or select it with [◀◀/REW] or [FF/▶▶] while the disc is stopped.

1 Press [MD EDIT] to select "MOVE?".

Each time you press the button;

TRACK ERASE?→MOVE?→COMBINE?→DIVIDE?

"DIVIDE?" is only displayed if the track is playing.

"COMBINE?" will not be displayed if you are playing track number 1.

2 Press [MEMORY/ENTER].

The track's current number is shown and the new position flashes to the right of it.

3 Press [◀◀/REW] or [FF/▶▶] to select the new track number.

4 Press [MEMORY/ENTER].

The old track number and new track number are displayed.

5 Press [MEMORY/ENTER] to confirm the new track number.

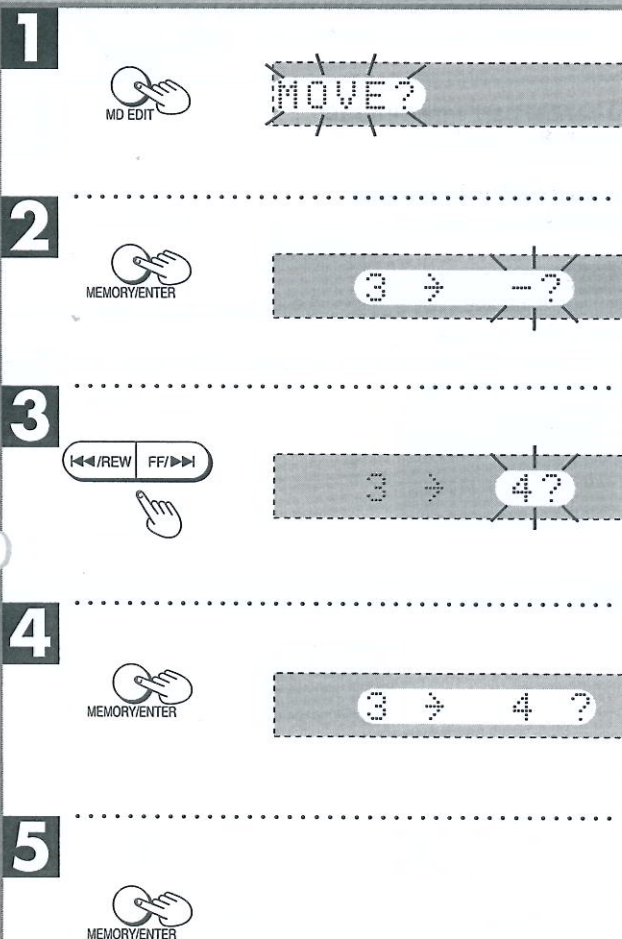
Play stops and "UTOOC Writing" flashes on the display. When this stops flashing, the new track number has been entered.

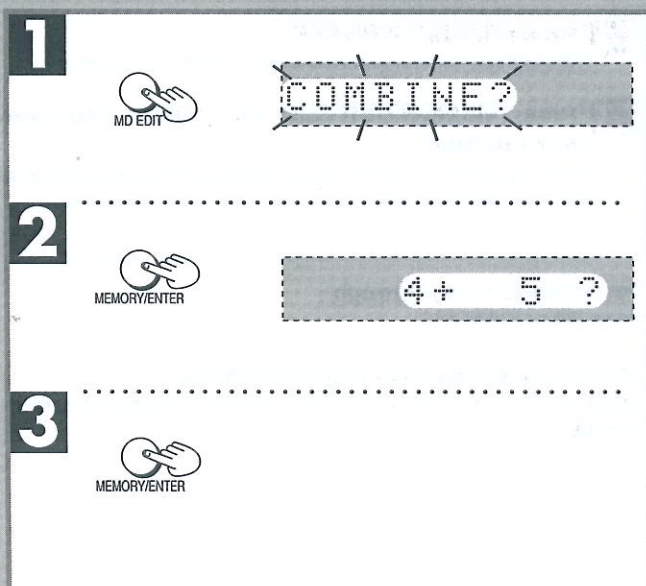
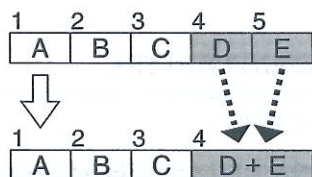
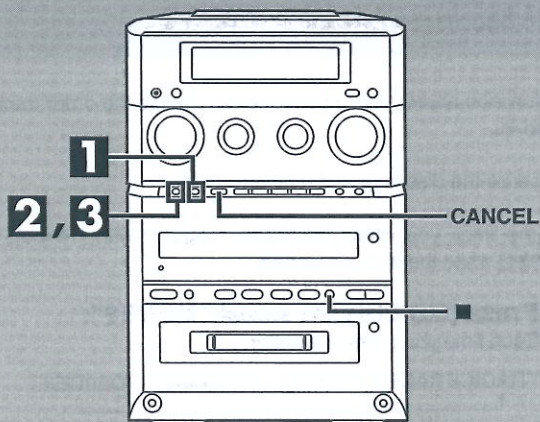
To cancel part way through

Press [■] or [CANCEL].

To return the track to its original position

Repeat the above steps, selecting the track's original number in step 3.





MD editing

Combining tracks - COMBINE

This function removes track marks so the tracks either side effectively become one track.

Make sure the disc is record enabled.

Play the track that comes after the track mark you want to remove, or select it with [◀◀/REW] or [FF/▶▶] while the player is stopped.

1 Press [MD EDIT] to select "COMBINE?".

Each time you press the button;

TRACK ERASE? → MOVE? → COMBINE? → DIVIDE?

"DIVIDE?" is only displayed if the track is playing.

"COMBINE?" will not be displayed if you are playing track number 1.

2 Press [MEMORY/ENTER].

The track numbers to be combined are displayed.

3 Press [MEMORY/ENTER] to confirm the combination.

Play stops and "UTOC Writing" flashes on the display. When this stops flashing the track mark has been removed and the two tracks now are counted as one.

To cancel part way through

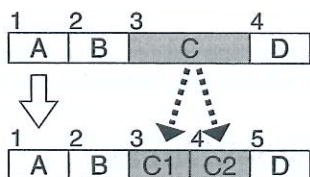
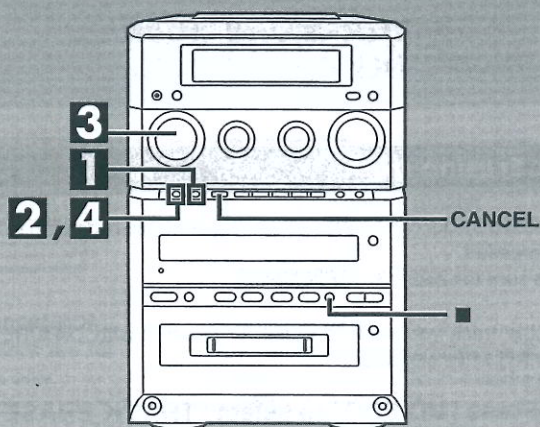
Press [■] or [CANCEL].

To divide the tracks again

Use DIVIDE (⇒ page 33).

Note

- If you combined titled tracks, the combined track retains only the title of the first track.
- You cannot combine a track recorded in SP mode with a track recorded in LP mode.



MD editing

Dividing tracks – DIVIDE

This function allows you to manually add track marks. You can edit a recording of a radio program or divide a symphony into its separate movements. Adding track marks will not interrupt sound.

Make sure the disc is record enabled.

Play the track you want to divide.

1 Press [MD EDIT] to select “DIVIDE?”.

Each time you press the button;

TRACK ERASE? → MOVE? → COMBINE? → DIVIDE?

“COMBINE?” will not be displayed if you are playing track number 1.

2 Press [MEMORY/ENTER] at the approximate point you want the track mark to go.

A four second segment of the track, beginning at the selected point, is played repeatedly. (If the track is recorded in LP mode, approximately 8 seconds.)

3 Turn [TUNE/TIME ADJ] to adjust the point.

Adjustments can be made between –128 and +127, approximately 8 seconds either side of the original point. (If the track is recorded in LP mode, approximately 16 seconds.)

4 Press [MEMORY/ENTER].

Play stops and “UTOC Writing” flashes on the display. When this stops flashing, the new track mark has been entered.

To cancel part way through

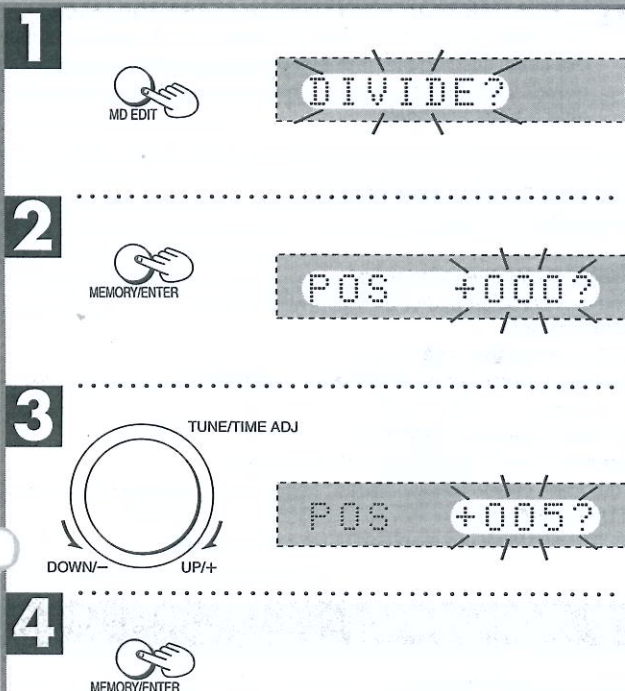
Press [■] or [CANCEL] at any point.

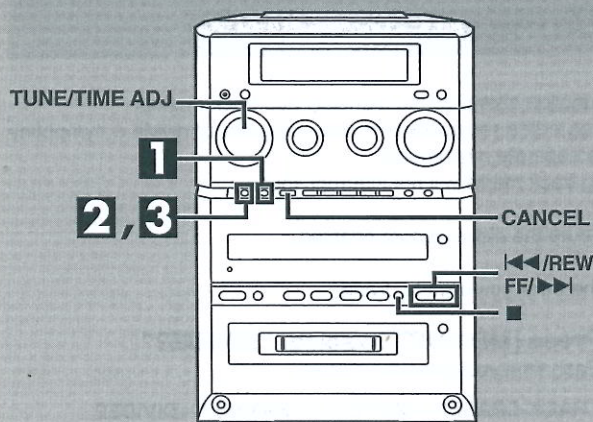
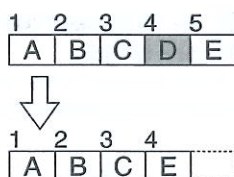
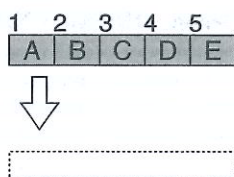
To remove the track mark again

Use COMBINE (⇒ page 32).

Note

If you divide a titled track, the part after the new track mark becomes untitled.



**A****B****A****1**

TRACK ERASE?

2

ERASE 4 ?

3**B****1**

ALL ERASE?

2

ALL ERASE ?

3

BLANK DISC

MD editing**Erasing tracks and creating blank discs****A Erasing tracks**

Unneeded tracks can be erased and the available recording time can be increased.

Make sure the disc is record enabled.

Play the track you want to erase, or select it with [**<</REW**] or [**FF/>>**] while stopped.

1 Press [MD EDIT] to select "TRACK ERASE?".

Each time you press the button;

TRACK ERASE? → MOVE? → COMBINE? → DIVIDE?

"DIVIDE?" is only displayed if the track is playing.

"COMBINE?" will not be displayed if you are playing track number 1.

2 Press [MEMORY/ENTER].

The track number is displayed.

3 Press [MEMORY/ENTER] to erase the track.

Play stops and "UTOC Writing" flashes on the display. When this stops flashing the track has been erased. The tracks after it move back to fill the space so there is no missing track number after a track is erased.

To cancel part way through

Press [**■**] or [CANCEL].

Erasing groups of tracks

You can erase groups of 24 tracks at one time.

While stopped

① Do steps **1** and **2** above.

② Press [**<</REW**] or [**FF/>>**] to select the track you want to erase.

③ Press [MEMORY/ENTER].

Repeat ② and ③ to select the other tracks.

You can check which tracks have been selected by turning [TUNE/TIME ADJ].

④ Press [MEMORY/ENTER] to erase the tracks.

B Erasing a disc

This creates a blank disc.

Make sure the disc is record enabled.

While the disc is stopped**1 Press [MD EDIT] to select "ALL ERASE?".**

Each time you press the button;

→ TRACK ERASE? → ALL ERASE? → MOVE? →
— TITLE ST.? ← COMBINE? ←

2 Press [MEMORY/ENTER].

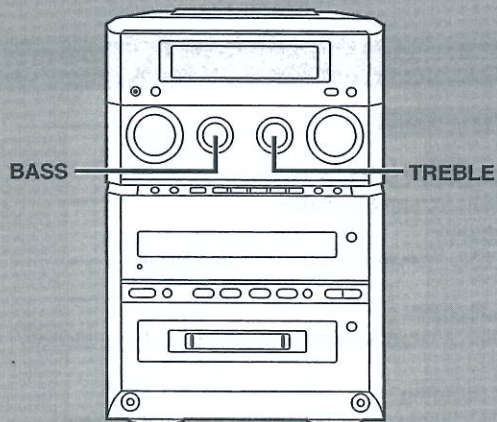
"ALL ERASE ?" is displayed.

3 Press [MEMORY/ENTER] to erase the disc.

"UTOC Writing" flashes on the display. When this stops flashing the disc has been erased and "BLANK DISC" is shown on the display.

To cancel part way through

Press [**■**] or [CANCEL].

A

Changing the sound quality

A To adjust the tone

Vary bass and treble levels between -6 and +6.

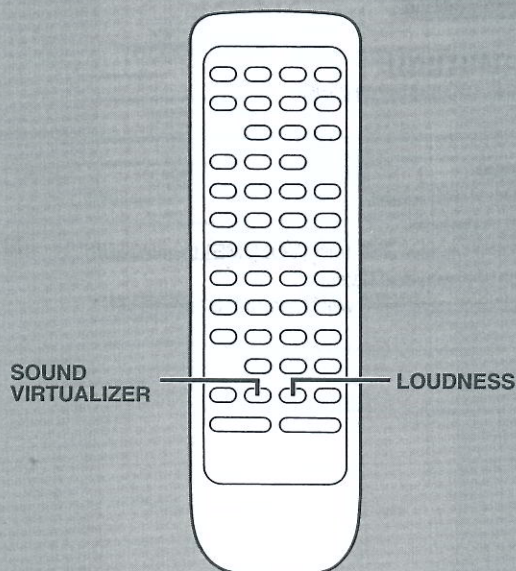
Turn **[BASS]** to adjust the low-frequency range.
Turn **[TREBLE]** to adjust the high-frequency range.

Note

Tone adjustments have no effect on recordings.

For your reference

Put your speakers on stands (not included) for clearer low range sounds.

B C

B Using the SOUND VIRTUALIZER

Remote control only

Vocals and other middle range sounds are clearer when this effect is used. Use it when listening to stereo sources.

Press **[SOUND VIRTUALIZER]**.

"S.V. ON" is displayed.

To cancel

Press **[SOUND VIRTUALIZER]**.

"S.V. OFF" is displayed.

This effect is less discernable when using headphones.
Cancel this effect if noise increases when listening to FM.

C Enjoying powerful sound at low volume (LOUDNESS)

Remote control only

Use **LOUDNESS** to emphasize the treble and bass ranges for more powerful sound when listening at low volume.

Press **[LOUDNESS]**.

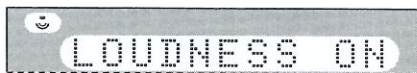
"LOUDNESS ON" is displayed.

Bass and treble cannot be adjusted manually while **LOUDNESS** is on.

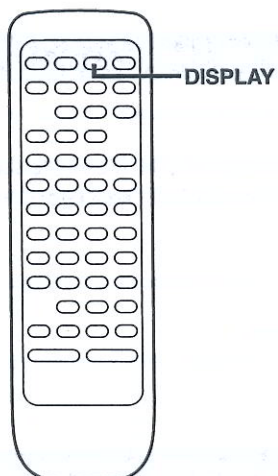
To cancel

Press **[LOUDNESS]**.

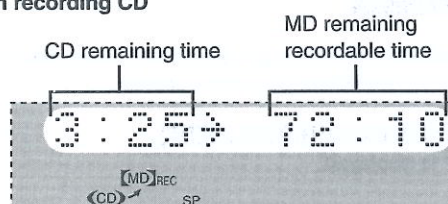
"LOUDNESS OFF" is displayed.

B**C**

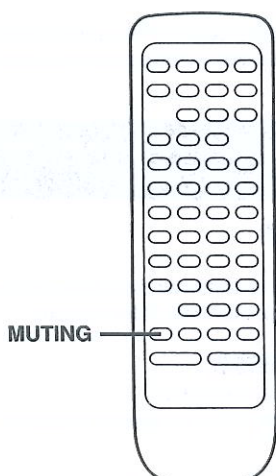
A



When recording CD



B



Convenient functions

A Switching the display while using MDs

Remote control only

Press [DISPLAY].

Each time you press the button;

During play

Track title→Remaining time→Original display

While stopped

Disc title→Available time for recording→Original display

While recording

MD track number→Available time→Original display

B Muting the volume

Remote control only

Press [MUTING].

Volume is reduced to minimum.

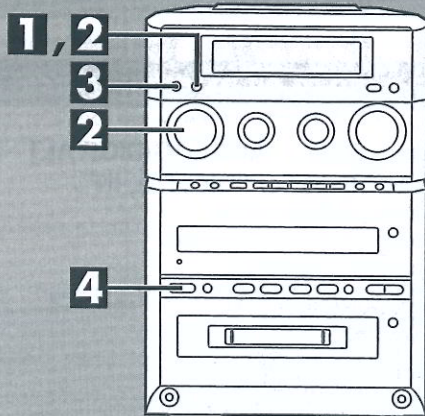
To cancel

Press [MUTING] again.

Volume is restored.

To cancel from the unit, turn [VOLUME] to minimum (—dB), then raise it to the required level.

Muting is also cancelled when the unit is turned off.



The play timer

This timer starts play of the selected source at the selected time. The example shows settings for play between 6:30 and 7:40.

Preparation:

- Press [⏻/I] to turn the unit on, set the time (⇒ page 10).
- Select the desired source for timer play.

MD, CD, tape

Press [■] to select the desired source and insert disc or cassette.

The radio

Press [TUNER/BAND] and tune in the desired station.

An external unit

Press [AUX, ANALOG/DIGITAL] to select "ANALOG-IN" or "DIGITAL-IN" (⇒ page 40).

- Set the volume for timer play.

1 Press [CLOCK/TIMER] to select "⌚ PLAY".

Each time you press the button;

CLOCK→⌚ PLAY→⌚ REC→Original display

2 Repeat ① and ② to set [A] and [B].

- ① Turn [TUNE/TIME ADJ] to select the desired condition.
- ② Press [CLOCK/TIMER].

[A] ON time

[B] OFF time

3 Press [⌚ PLAY/⌚ REC] to select "TIMER-PLAY".

Each time you press the button;

TIMER-PLAY→TIMER-REC→TIMER-OFF

The ⌚ PLAY/⌚ REC indicator lights.

4 Press [⏻/I] to turn the unit off.

The timer starts in the set condition at the set time.

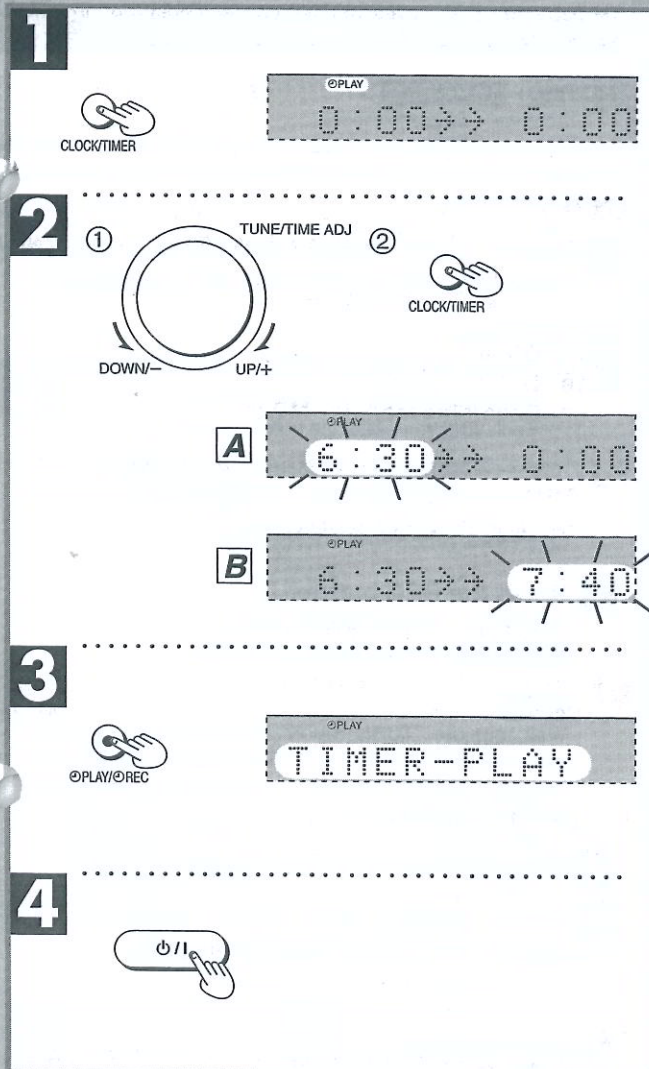
The volume increases gradually to the set level.

If you set the timer incorrectly

Repeat the procedure from step 1.

To cancel the timer

- ① Press [⏻/I] to turn the unit on.
 - ② Press [⌚ PLAY/⌚ REC] to select "TIMER-OFF".
- The ⌚ PLAY/⌚ REC indicator turns off.



The record timer

This timer records the radio or an external source at the set time. The example shows settings for recording on an MD from 18:30 to 20:00.

Preparation:

- Press [⏻/⏻] to turn the unit on, set the time (⇒ page 10).
- Select the desired source.

The radio

Press [TUNER/BAND] and tune in the desired station.

An external unit

Press [AUX, ANALOG/DIGITAL] to select "ANALOG-IN" or "DIGITAL-IN" (⇒ page 40).

- Insert an MD or a tape and do the preparatory steps. (⇒ pages 20 and 21).
- When recording to an MD, select the required recording mode (⇒ page 20). The modes you can choose depend on the source you want to record.

1 Press [CLOCK/TIMER] to select "⌚ REC".

Each time you press the button;

CLOCK→⌚ PLAY→⌚ REC→Original display

2 Repeat ① and ② to set [A], [B] and [C].

① Turn [TUNE/TIME ADJ] to select the desired condition.

② Press [CLOCK/TIMER].

[A] ON time

[B] OFF time

[C] Recording method: MD or TAPE

3 Press [⌚ PLAY/⌚ REC] to select "TIMER-REC".

Each time you press the button;

TIMER-PLAY→TIMER-REC→TIMER-OFF

The ⌚ PLAY/⌚ REC indicator lights.

4 Press [⏻/⏻] to turn the unit off.

Recording starts 30 seconds before the set time with the volume muted during the set time.

If you set the timer incorrectly

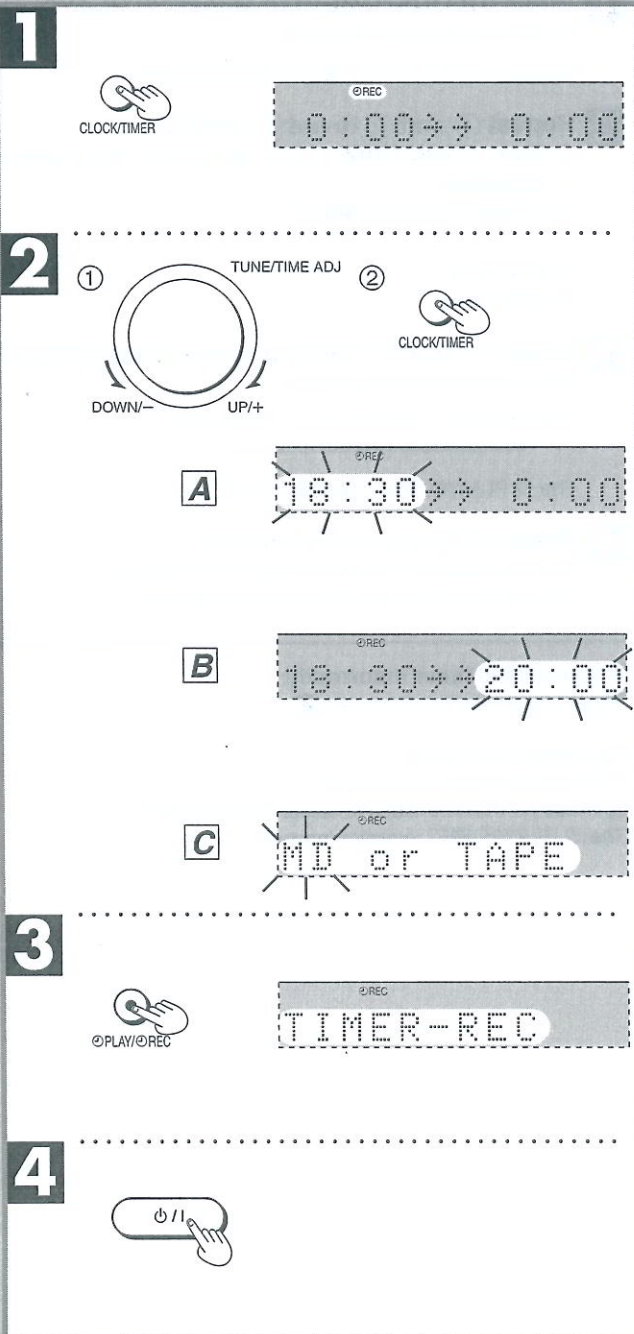
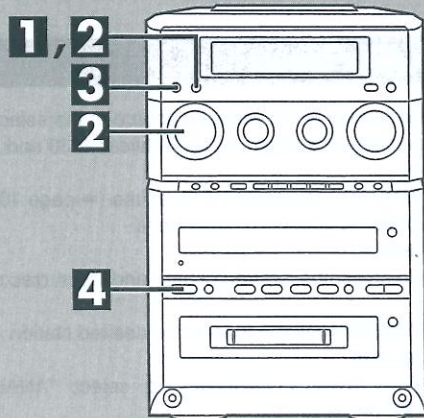
Repeat the procedure from step 1.

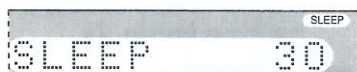
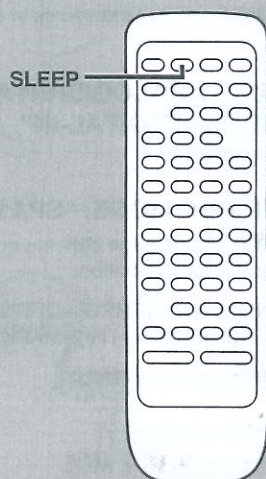
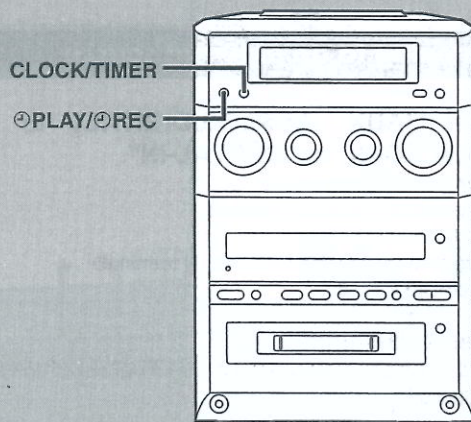
To cancel the timer

- ① Press [⏻/⏻] to turn the unit on.
- ② Press [⌚ PLAY/⌚ REC] to select "TIMER-OFF". The ⌚ PLAY/⌚ REC indicator turns off.

Note

Timer recording starts from the set time even if TURN BACK or TURN/TIME is selected.





A The play and record timers

Checking the timers

While the unit is off

Press [CLOCK/TIMER].

The timer conditions are shown in the following order.

Play timer:

start and finish times → source → volume

Record timer:

start and finish times → source → source recorded from and
source recorded to

While the unit is on

Press [CLOCK/TIMER] to select "⊙ PLAY" or "⊙ REC".

Start and finish times are shown.

Turning the timers on and off

The selected timer comes on at the set times if the ⊙ PLAY/⊙ REC indicator is alight. The indicator can be turned on and off by pressing [⊙ PLAY/⊙ REC] while the unit is on.

Playing the unit after the timers are set

The unit can be used after the timers are set.

Make sure to reset the tape direction if playing or recording on a tape, and turn the unit off before the set start time.

Note

If AUX is selected as the source, when the timer comes on, the system turns on and engages AUX as the source. If you want to playback or record from a connected external unit, set the external unit's timer to the same time. (See the instruction manual that came with the external unit.)

B The sleep timer

Remote control only

This function turns the unit off after a set time.

While playing a source

Press [SLEEP] to select the time (minutes).

Each time you press the button;

→ SLEEP 30 → SLEEP 60 → SLEEP 90
SLEEP OFF ← SLEEP 120 ←

To cancel the sleep timer

Press [SLEEP] to select "SLEEP OFF".

To confirm the remaining time

While the timer is functioning

Press [SLEEP].

The remaining time is shown for about five seconds.

To change the setting

Press [SLEEP] to display the remaining time, then press again to select the required time.

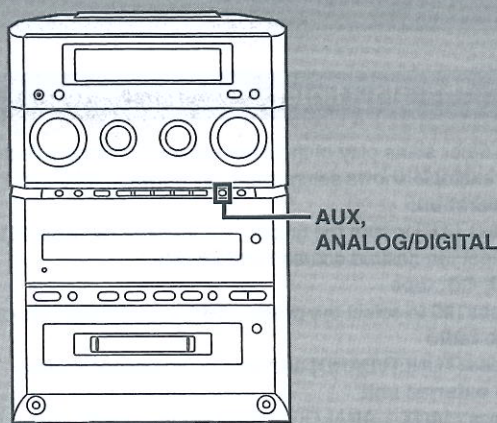
Using the timers together

The play and sleep timer or the record and sleep timer can be used together.

The sleep timer always has priority. Be sure not to overlap timer settings.

The play and record timer cannot be used in combination.

A

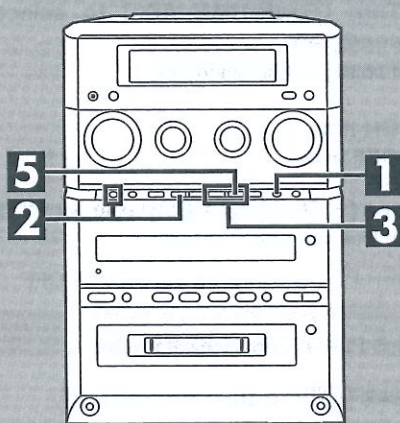


ANALOG/DIGITAL



ANALOG-IN

B



1

ANALOG/DIGITAL



ANALOG-IN

2

①



MD REC MODE

②

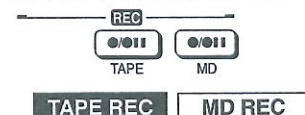


MEMORY/ENTER

TURN BACK

[MD] TURN BACK

3



TAPE REC

MD REC

TURN BACK

[MD REC] TURN BACK

5



MD

Using other equipment

A Listening to an external source

- 1 Press [AUX, ANALOG/DIGITAL] to select "ANALOG-IN" or "DIGITAL-IN".

When the external unit is

Connected to the AUX terminals:

Select "ANALOG-IN".

Connected to the OPT DIGITAL IN terminal:

Select "DIGITAL-IN".

- 2 Operate the unit.

See the unit's operating instructions for details on operation and connection.

B Recording an external source

MD REC **TAPE REC**

If you have connected the source to the OPT DIGITAL IN terminal, recording will be digital. To record the source in analog, connect it to the AUX terminals.

- 1 Press [AUX, ANALOG/DIGITAL] to select "ANALOG-IN" or "DIGITAL-IN". (See above.)

MD REC only

- 2 ① Press [MD REC MODE, -SP/LP] to select the desired mode. (→ page 20)

Each time you press the button;

MANUAL → SYNCHRO → TURN BACK
TURN/TIME ← TIME MARK ←

- ② Press [MEMORY/ENTER].

- 3 Press the REC button.

MD REC: Press [●/●II, MD].

TAPE REC: Press [●/●II, TAPE].

Note

Wait until the "TURN BACK" indicator stops flashing. If you selected "TURN BACK" or "TURN/TIME" in step 2. (Turn back may not function correctly if recording is started while the indicator is flashing. ④)

- 4 Start the source to be recorded.

- 5 Press [●/●II, MD] if you selected "TURN BACK" or "TURN/TIME" in step 2.

To stop recording

Press [■].

MD REC

Recording is complete after "UTOC Writing" stops flashing on the display.

MD REC

Note

Sound is interrupted briefly when recording digitally onto MDs when recording is started and while "UTOC Writing" is flashing. The interruption has no effect on recording.

To add track marks while recording on MDs

Press [TRACK MARK] on the remote control where the track mark is required.

Recording from a portable MD player

MD REC

Make an analog recording from a portable MD player connected to the P-MD terminal.

Preparation:

Set the volume on the portable MD player to an appropriate level and turn all sound quality modes off.

1 Press [P-MD].

2 ① Press [MD REC MODE, -SP/LP] to select the desired mode. (→ page 20)

Each time you press the button;
MANUAL ↔ SYNCHRO

② Press [MEMORY/ENTER].

3 Press [●/●II, MD].

4 Start the portable MD player.

To stop recording

Press [■].

Recording is complete after "UTOOC Writing" stops flashing on the display.

To add track marks while recording

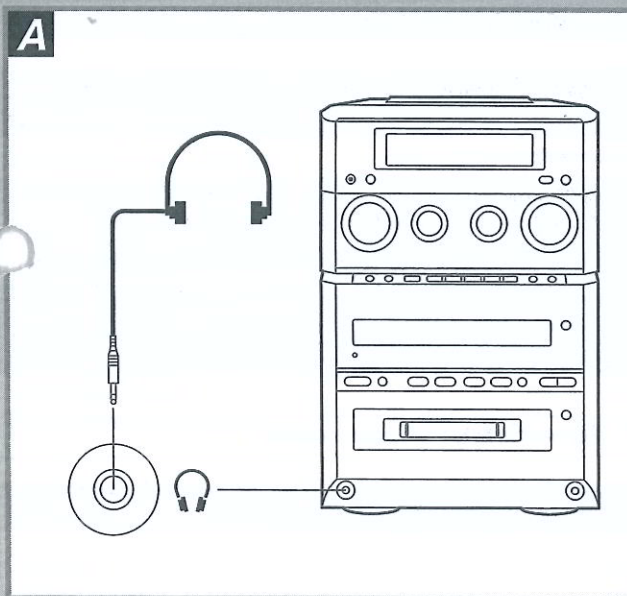
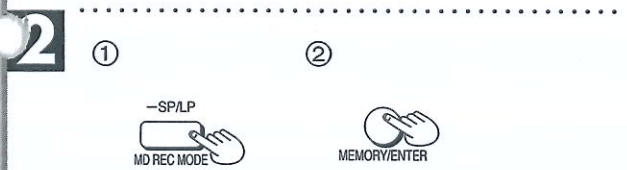
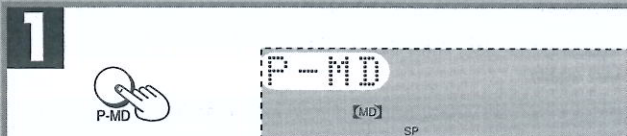
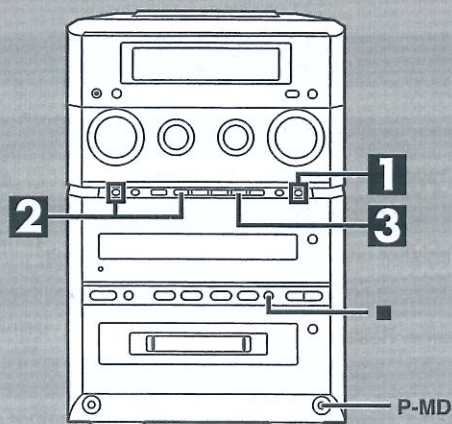
Press [TRACK MARK] on the remote control where the track mark is required.

A Using headphones (not included)

Reduce the volume before connection.

Avoid listening for prolonged periods of time to prevent hearing damage.

Plug type: 3.5 mm stereo



ADJUST CLOCK	The clock has not been set.
ADJUST TIMER	Set the ON and OFF time of the timer.
CAN NOT/TITLE INPUT	Titles can be input only one time during auto edit recording.
CAN'T COMBINE	The limitations of the system sometimes mean tracks cannot be combined.
CAN'T DIVIDE	The limitations of the system sometimes mean tracks cannot be divided.
CAN'T EDIT	A title of over 100 characters (titled with another unit) cannot be edited with this unit.
CAN'T MEMORIZE	A title couldn't be put in the memory during title station operation. Repeat the operation.
CHANGE TIME	The timer's ON time and OFF time are same. Reset the times.
DISC ERROR	There is a problem with the disc and it needs to be replaced.
DISC FULL	The maximum time has been reached. Either erase some tracks or record with another disc.
DISC/PROTECTED	The write protect hole is open. Close it to enable recording and editing.
EJECT ERROR	A problem occurred while loading or ejecting the disc. After this is displayed the unit automatically switches off. Remove the MD and start again.
LOAD ERROR	
EMERGENCY/STOP	A problem occurred during recording. Eject the MD, reinsert it and start recording from the beginning again.
ERROR	Incorrect operation was performed. Read the instructions and try again.
MD F26	Turn the unit off then on again and reinsert the MD. Consult a dealer if the same display appears again.
MD NO DISC CD NO DISC	A disc hasn't been inserted.
PlaybackDISC	The MD can only be used for playback. It cannot be recorded on or edited in anyway.
SCMS CAN'T COPY	You are trying to make a second copy of a digital recording. You cannot record from video CDs or CD-ROM.
TITLE FULL	You have entered the maximum number of letters. No more letters can be added to this track.
TITLE OVER	You have entered the maximum number of letters. No more letters can be added to this MD.
TOC Reading	The unit is reading information on the disc. The unit cannot be operated while this is displayed.
TRACK NUMBER/ NOT EQUAL	Titles cannot be copied to an MD with a different number of tracks.
TRACK/PROTECTED	The track has been protected with a function of another unit. Check whether you want to erase or edit the track before proceeding.
UNLOCK	Check the digital optical fiber cable connection and try again.
UTOO FULL	This display appears for one of the following reasons. <ul style="list-style-type: none"> •The section reserved for text information is full; erase unneeded titles to make room. •The maximum number of tracks (254) has been reached; erase unneeded tracks.

Maintenance

If the surfaces are dirty

To clean this unit, wipe with a soft, dry cloth.

If the surfaces are extremely dirty, use a soft cloth dipped in a soap-and-water solution or a weak detergent solution.

- Never use alcohol, paint thinner or benzine to clean this unit.
- Before using chemically treated cloth, read the instructions that came with the cloth carefully.

For a cleaner crisper sound

Clean the heads regularly to assure good quality playback and recording. Use a cleaning tape (not included).

Troubleshooting guide

Before requesting service, make the below checks. If you can't fix the system as described below, or if something not listed here occurs, refer to the enclosed directory to locate an Authorized Service Center convenient to you or contact your dealer.

Reference pages are shown as black circled numbers ⑤.

Common Problems

No sound.	Turn the volume up. The speaker cords may be shorted. Turn the unit off, check and correct the connections and turn the unit on. ⑤
Sounds unfixed, reversed or come from one speaker only.	Check the speaker connections. ⑤
Humming heard during play.	An AC mains lead or fluorescent light is near the cables. Keep other appliances and leads away from this unit's cables. If possible in your area, turn the AC mains lead's plug or connector over to reverse the lead's polarity.
Unusual operation or display.	Reset the unit to its original factory settings. ① Disconnect the AC mains lead. ② Use a pen to press the reset button, located on the rear panel, for about 5 seconds. Now reenter the contents of the memory, such as radio station presets and timer settings. If operations or the display continue to act unusually, consult your dealer.

Car radio

Noise is heard. The stereo indicator flickers or doesn't light. Sound is distorted.	Use an outdoor antenna. ⑦
A beat sound is heard.	Turn the TV off or separate it from the unit.
A low hum is heard during AM broadcast.	Separate the antenna from other cables and leads.

MDs

Cannot start play.	There may be condensation inside the unit. Wait for an hour and try again.
Cannot record.	Close the write protect hole. ⑪ Check all connections. ⑤, ⑥ Replace with a recording MD. ⑪
Cannot enter text.	Reduce the amount of text on the MD. (An MD can hold up to about 1700 characters.) ②⑨
The disc isn't pulled automatically into the unit, or it needs to be pushed forcefully to go in.	Turn the unit off then on again. This situation can occur if the MD is stopped when ejecting or if it is forced into the slot.
No operation or incorrect display.	The MD may not act correctly in some cases because of the system used for recording. This may cause the following problems. • UTOC FULL is displayed despite there being space on the MD and the maximum number of tracks is yet to be reached. • COMBINE or DIVIDE cannot be used. • Remaining time doesn't increase after erasing a track.

CDs

The display is wrong or play won't start.	The disc may be upside down. ⑬ Wipe the disc. Replace the disc if it is scratched, warped, or nonstandard. ⑬ There may be condensation inside the unit. Wait for an hour and try again.
Only one track from the CD is recorded.	Press [CD EDIT] to cancel one track edit recording and to select the required mode. (AUTO REC or OFF.) ②③

Cassette tapes

Poor quality sound.	Clean the heads. ④②
Recording is not possible.	If the erasure prevention tabs have been removed, cover the holes with adhesive tape. ④①

Specifications

■ Amplifier section

RMS power output	
THD 10 %, both channels driven	
HIGH	2×6 W (6 Ω)
LOW	2×14 W (6 Ω)
Total BI-AMP power	2×20 W
PMPO power output (Except for United Kingdom)	
Total BI-AMP power	170 W
Input sensitivity	
AUX	320 mV
P-MD	100 mV
Input impedance	
AUX	22 kΩ
P-MD	10 kΩ
Output impedance	
Headphone	16–32 Ω

■ FM tuner section

Frequency range	87.50–108.00 MHz (0.05 MHz steps)
Sensitivity	1.8 μV (IHF)
S/N 26 dB	1.5 μV
Antenna terminals	75 Ω unbalanced

■ AM tuner section

Frequency range	
For United Kingdom	522–1629 kHz (9 kHz steps)
For others	522–1629 kHz (9 kHz steps)
	520–1630 kHz (10 kHz steps)
Sensitivity	
S/N 20 dB	500 μV/m

■ Cassette deck section

Track system	4 track, 2 channel
Heads	
Record/playback	Solid permalloy head
Erase	Double gap ferrite head
Motor	DC servo motor
Recording system	AC bias 100 kHz
Erasing system	AC erase 100 kHz
Tape speed	4.8 cm/s
Overall frequency response (±3 dB at DECK OUT)	
Type I (Normal)	50 Hz–13 kHz
Type II (High)	50 Hz–13 kHz
S/N ratio	
Type I (Normal)	52 dB (A weighted)
Wow and flutter	0.18 % (WRMS)
Fast forward and rewind time	Approx. 120 seconds with C-60 cassette tape

■ MD section

System	Minidisc digital audio system
Recording	Magnetic field modulation direct overwrite
Reading	Non-contact optical system with semiconductor laser (λ=780 nm)
Sampling frequency	44.1 kHz
Coding system	ATRAC*
Number of channels	2 channels stereo
Wow and flutter	Below measurable limit

■ CD section

Sampling frequency	44.1 kHz
Decoding	16 bit linear
Beam source	Semiconductor laser
Wave length	780 nm
Number of channels	2 channels stereo
S/N ratio	
SP OUT	82 dB (JIS A)
Wow and flutter	Below measurable limit
Digital filter	8 fs
D/A converter	MASH (1 bit DAC)

■ Speakers (SB-PM30)

Type	2 way speaker system
Superwoofer	14 cm cone type
Full range	8 cm cone type
Impedance	
HIGH	6 Ω
LOW	6 Ω
Input power	
HIGH	10 W (Music)
LOW	30 W (Music)
Output sound pressure	86 dB/w (1.0 m)
Cross over frequency	110 Hz
Frequency range	
	52 Hz–22 kHz (–10 dB)
	43 Hz–25 kHz (–16 dB)

■ Dimensions (W×H×D)

Weight	170×287×242 mm
	3.0 kg

■ General

Power supply	
For United Kingdom	AC 230–240 V, 50 Hz
For others	AC 110–120/220–240 V, 50/60 Hz
Power consumption	74 W
Standby	
ECO	
For United Kingdom	0.6 W
For others	1.2 W
NORMAL	8.5 W
Dimensions (W×H×D)	195×288×292 mm
Weight	5.6 kg

Notes:

- Specifications are subject to change without notice.
Weight and dimensions are approximate.
- Total harmonic distortion is measured by the digital spectrum analyzer.

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